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PA
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     Mueller, Alan L.; Moe, Scott T.; Balandrin, Manuel F.; Vanwagenen,
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     Daryl L.
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     NPS Pharmaceuticals, Inc., USA; Mueller, Alan L.; Moe, Scott T.;
     Balandrin, Manuel F.; Vanwagenen, Bradford C.; Delmar, Eric G.; Artman,
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     Daryl L.
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     US 1994-194210
                       B2
                            19940208
     US 1994-288668
                       B2
                            19940809
     WO 1994-US12293
                       A2
                            19941026
     WO 1996-US10201
                       W
                            19960607
     MARPAT 126:143970
os
L5
     ANSWER 5 OF 5 USPATFULL on STN
AN
       96:72128 USPATFULL
ΤI
       Universal, hydraulic, self adjusting, work clamping device
IN
       Schuit, Johannes, 1433 Camilo Trillado, Carpinteria, CA, United States
       93013
PΙ
       US 5544872
                               19960813
ΑI
       US 1994-288688
                               19940811 (8)
DT
       Utility
FS
       Granted
LN.CNT 256
INCL
       INCLM: 269/026.000
       INCLS: 269/060.000; 269/148.000; 269/208.000; 269/266.000
       NCLM: 269/026.000
NCL
       NCLS: 269/060.000; 269/148.000; 269/208.000; 269/266.000
IC
       [6]
       ICM: B25B005-14
EXF
       269/266; 269/60; 269/91-94; 269/204; 269/208; 269/148; 269/20; 269/25;
       269/26
```

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 1 OF 7 USPATFULL on STN

ACCESSION NUMBER: 2002:8522 USPATFULL

TITLE: Compounds active at a novel site on receptor-operated

calcium channels useful for treatment of neurological

disorders and diseases

INVENTOR(S): Mueller, Alan L., Salt Lake City, UT, UNITED STATES

Moe, Scott T., Salt Lake City, UT, UNITED STATES

NPS Pharmaceuticals, Inc. (U.S. corporation) PATENT ASSIGNEE(S):

> NUMBER KIND DATE

-----PATENT INFORMATION:

US 2002004522 A1 20020110 US 2001-825373 A1 20010402 APPLICATION INFO.: 20010402 (9)

Continuation of Ser. No. US 1998-186341, filed on 4 Nov RELATED APPLN. INFO.:

1998, GRANTED, Pat. No. US 6211245 Continuation of Ser. No. US 1997-873011, filed on 11 Jun 1997, ABANDONED Continuation-in-part of Ser. No. US 1996-763480, filed

on 11 Dec 1996, GRANTED, Pat. No. US 6017965

Continuation-in-part of Ser. No. US 1996-663013, filed on 7 Jun 1996, ABANDONED Continuation-in-part of Ser. No. US 1995-485038, filed on 7 Jun 1995, GRANTED, Pat.

No. US. 6071970 Continuation-in-part of Ser. No. WO 1994-US12293, filed on 26 Oct 1994, UNKNOWN

Continuation-in-part of Ser. No. US 1994-288688, filed

on 11 Aug 1994, GRANTED, Pat. No. US 5544872

Continuation-in-part of Ser. No. US 1994-194210, filed on 8 Feb 1994, ABANDONED Continuation-in-part of Ser.

No. US 1993-14813, filed on 8 Feb 1993, ABANDONED

DOCUMENT TYPE: Utility FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: Foley & Lardner, 23rd Floor, 402 W. Broadway, San

Diego, CA, 92101-3542

EXEMPLARY CLAIM: LINE COUNT: 6312

NUMBER OF CLAIMS:

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Method and compositions for treating a patient having a neurological disease or disorder, such as stroke, head trauma, spinal cord injury, spinal cord ischemia, ischemia- or hypoxia-induced nerve cell damage, epilepsy, anxiety, neuropsychiatric or cognitive deficits due to ischemia or hypoxia such as those that frequently occur as a consequence of cardiac surgery under cardiopulmonary bypass, or neurodegenerative diseases such as Alzheimer's Disease, Huntington's Disease, Parkinson's Disease, or amyotrophic lateral sclerosis (ALS).

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 2 OF 7 USPATFULL on STN

ACCESSION NUMBER: 2001:185346 USPATFULL

TITLE: Compounds active at a novel site on receptor-operated

calcium channels useful for treatment of neurological

disorders and diseases

INVENTOR(S): Mueller, Alan L., Salt Lake City, UT, United States

VanWagenen, Bradford C., Salt Lake City, UT, United

States

DelMar, Eric G., Salt Lake City, UT, United States Balandrin, Manuel F., Sandy, UT, United States Moe, Scott T., Salt Lake City, UT, United States Artman, Linda D., Salt Lake City, UT, United States

PATENT ASSIGNEE(S): NPS Pharmaceuticals, Inc., Salt Lake City, UT, United

States (U.S. corporation)

NUMBER KIND DATE PATENT INFORMATION: US 6306912 B1 20011023 APPLICATION INFO.: US 1995-483294 19950607 (8)

RELATED APPLN. INFO.: Continuation of Ser. No. WO 1994-US12293, filed on 26

Oct 1994 Continuation-in-part of Ser. No. US

1994-288688, filed on 11 Aug 1994, now patented, Pat. No. US 5544872 Continuation-in-part of Ser. No. US 1994-194210, filed on 8 Feb 1994, now abandoned

Continuation-in-part of Ser. No. US 1993-14813, filed

on 8 Feb 1993, now abandoned

DOCUMENT TYPE: Utility FILE SEGMENT: GRANTED

PRIMARY EXAMINER: Celsa, Bennett ASSISTANT EXAMINER: Hsu, Grace

LEGAL REPRESENTATIVE: Warburg, Richard J. Foley & Lardner

NUMBER OF CLAIMS: 12 EXEMPLARY CLAIM: 1 LINE COUNT: 3686

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Method for identifying a compound useful for the therapeutic treatment of a neurological disease or disorder such as stroke, head trauma, spinal cord injury, epilepsy, anxiety, or neurodegenerative diseases such as Alzheimer's Disease, Huntington's Disease or Parkinson's Disease, or useful as a muscle relaxant, analgesic, or adjuvant to general anesthetics. The compound is active on a receptor-operated calcium channel, including, but not limited to, that present as part of an NMDA receptor-ionophore complex, a calcium-permeable AMPA receptor, or a nicotinic cholinergic receptor, as a noncompetitive antagonist. The method includes identifying a compound which binds to the receptor-operated calcium channel at the site bound by the arylalkylamines Compound 1, Compound 2 or Compound 3.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 3 OF 7 USPATFULL on STN

ACCESSION NUMBER: 200

ACCESSION NUMBER:

2001:48118 USPATFULL

TITLE:

Compounds active at a novel site on receptor-operated calcium channels useful for treatment of neurological

disorders and diseases

INVENTOR(S):

Mueller, Alan L., Salt Lake City, UT, United States Moe, Scott T., Salt Lake City, UT, United States

PATENT ASSIGNEE(S):

NPS Pharmaceuticals, Inc., Salt Lake City, UT, United

States (U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION: APPLICATION INFO.:

US 6211245 B1 20010403 US 1998-186341 19981104 (9) Continuation of Ser. No. US 1997-873011, filed on 11

RELATED APPLN. INFO.:

Jun 1997 Continuation-in-part of Ser. No. US 1997-869154, filed on 4 Jun 1997, now abandoned Continuation-in-part of Ser. No. US 1996-763480, filed on 11 Dec 1996, now patented, Pat. No. US 6017965 Continuation-in-part of Ser. No. US 1996-663013, filed on 7 Jun 1996, now abandoned Continuation in part of

on 7 Jun 1996, now abandoned Continuation-in-part of Ser. No. US 1995-485038, filed on 7 Jun 1995 Continuation-in-part of Ser. No. WO 1994-US12293, filed

on 26 Oct 1994 Continuation-in-part of Ser. No. US 1994-288668, filed on 9 Aug 1994, now abandoned Continuation-in-part of Ser. No. US 1994-194210, filed on 8 Feb 1994, now abandoned Continuation-in-part of Ser. No. US 1993-14813, filed on 8 Feb 1993, now

abandoned

DOCUMENT TYPE: FILE SEGMENT:

Utility Granted PRIMARY EXAMINER:

Raymond, Richard L.

NUMBER OF CLAIMS: EXEMPLARY CLAIM:

6559

LINE COUNT:

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Method and compositions for treating a patient having a neurological disease or disorder, such as stroke, head trauma, spinal cord injury, spinal cord ischemia, ischemia- or hyproxia-induced nerve cell damage, epilepsy, anxiety, neuropsychiatric or cognitive deficits due to ischemia or hypoxia such as those that frequently occur as a consequence

of cardiac surgery under cardiopulmonary bypass, or neurodegenerative diseases such as Alzheimer's Disease, Huntington's Disease, Parkinson's Disease, or amyotrophic lateral sclerosis (ALS).

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 4 OF 7 USPATFULL on STN

ACCESSION NUMBER:

2000:70898 USPATFULL

TITLE:

Compounds active at a novel site on receptor-operated calcium channels useful for treatment of neurological

disorders and diseases

INVENTOR(S):

Mueller, Alan L., Salt Lake City, UT, United States Balandrin, Manuel F., Sandy, UT, United States VanWagenen, Bradford C., Salt Lake City, UT, United

States

DelMar, Eric G., Salt Lake City, UT, United States Moe, Scott T., Salt Lake City, UT, United States Artman, Linda D., Salt Lake City, UT, United States Barmore, Robert M., Salt Lake City, UT, United States

PATENT ASSIGNEE(S):

NPS Pharmaceuticals, Inc., Salt Lake City, UT, United

States (U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION:

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APPLICATION INFO.:

RELATED APPLN. INFO.:

US 6071970 20000606 US 1995-485038 19950607 (8) Continuation-in-part of Ser. No. WO 1994-US12293, filed

on 26 Oct 1994 which is a continuation-in-part of Ser. No. US 1994-288668, filed on 9 Aug 1994, now abandoned

which is a continuation-in-part of Ser. No. US

1994-194210, filed on 8 Feb 1994, now abandoned which is a continuation-in-part of Ser. No. US 1993-14813,

filed on 8 Feb 1993, now abandoned

DOCUMENT TYPE:

Utility

FILE SEGMENT:

Granted

PRIMARY EXAMINER:

Raymond, Richard L.

LEGAL REPRESENTATIVE:

Lyon & Lyon LLP

NUMBER OF CLAIMS: EXEMPLARY CLAIM:

185

LINE COUNT:

5430

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Method and compositions for treating a patient having a neurological disease or disorder, such as stroke, head trauma, spinal cord injury, epilepsy, anxiety, or neurodegenerative diseases such as Alzheimer's Disease, Huntington's Disease, Parkinson's Disease, or amyotrophic lateral sclerosis (ALS).

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 5 OF 7 USPATFULL on STN

ACCESSION NUMBER:

2000:47267 USPATFULL

TITLE:

Compounds active at a novel site on receptor-operated calcium channels useful for treatment of neurological

disorders and diseases

INVENTOR(S): Mueller, Alan L., Salt Lake City, UT, United States

Balandrin, Manuel F., Sandy, UT, United States

Van Wagenen, Bradford C., Salt Lake City, UT, United

States

DelMar, Eric G., Salt Lake City, UT, United States Moe, Scott T., Salt Lake City, UT, United States Artman, Linda D., Salt Lake City, UT, United States Barmore, Robert M., Salt Lake City, UT, United States

PATENT ASSIGNEE(S): NPS Pharmaceuticals, Inc., Salt Lake City, UT, United

States (U.S. corporation)

NUMBER KIND DATE -----

US 1999-252433 PATENT INFORMATION: 20000418

APPLICATION INFO.: 19990218 (9)

Continuation of Ser. No. US 1995-485038, filed on 7 Jun RELATED APPLN. INFO.:

1995 which is a continuation-in-part of Ser. No. WO

1994-US12293, filed on 26 Oct 1994 which is a

continuation-in-part of Ser. No. US 1994-288668, filed

on 9 Aug 1994, now abandoned which is a

continuation-in-part of Ser. No. US 1994-194210, filed

on 8 Feb 1994, now abandoned which is a

continuation-in-part of Ser. No. US 1993-14813, filed

on 8 Feb 1993, now abandoned

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

PRIMARY EXAMINER: Raymond, Richard L. Lyon & Lyon LLP

LEGAL REPRESENTATIVE: NUMBER OF CLAIMS: 24 EXEMPLARY CLAIM:

LINE COUNT: 4670

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Method and compositions for treating a patient having a neurological disease or disorder, such as stroke, head trauma, spinal cord injury, epilepsy, anxiety, or neurodegenerative diseases such as Alzheimer's Disease, Huntington's Disease, Parkinson's Disease, or amyotrophic

lateral sclerosis (ALS).

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 6 OF 7 USPATFULL on STN

ACCESSION NUMBER: 2000:9954 USPATFULL

TITLE:

Compounds active at a novel site on receptor-operated calcium channels useful for treatment of neurological

disorders and diseases

INVENTOR(S): Mueller, Alan L., Salt Lake City, UT, United States

Balandrin, Manuel F., Sandy, UT, United States VanWagenen, Bradford C., Salt Lake City, UT, United

States

Moe, Scott T., Salt Lake City, UT, United States DelMar, Eric G., Salt Lake City, UT, United States Artman, Linda D., Salt Lake City, UT, United States Barmore, Robert M., Salt Lake City, UT, United States Smith, Daryl L., Salt Lake City, UT, United States

PATENT ASSIGNEE(S): NPS Pharmaceuticals, Inc., Salt Lake City, UT, United

States (U.S. corporation)

NUMBER KIND DATE

-----PATENT INFORMATION:

US 1996-763480 20000125 APPLICATION INFO.: 19961211 (8)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1996-663013, filed on 7 Jun 1996 which is a continuation-in-part of Ser.

No. US 1995-485038, filed on 7 Jun 1995 which is a

continuation-in-part of Ser. No. WO 1994-US12293, filed on 26 Oct 1994 which is a continuation-in-part of Ser. No. US 1994-288668, filed on 9 Aug 1994, now abandoned which is a continuation-in-part of Ser. No. US 1994-194210, filed on 8 Feb 1994, now abandoned which is a continuation-in-part of Ser. No. US 1993-14813, filed on 8 Feb 1993, now abandoned

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

PRIMARY EXAMINER: Raymond, Richard L. LEGAL REPRESENTATIVE: Lyon & Lyon LLP

NUMBER OF CLAIMS: 35 EXEMPLARY CLAIM: 1 LINE COUNT: 6207

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Method and compositions for treating a patient having a neurological disease or disorder, such as stroke, head trauma, spinal cord injury, spinal cord ischemia, ischemia- or hypoxia-induced nerve cell damage, epilepsy, anxiety, neuropsychiatric or cognitive deficits due to ischemia or hypoxia such as those that frequently occur as a consequence of cardiac surgery under cardiopulmonary bypass, or neurodegenerative diseases such as Alzheimer's Disease, Huntington's Disease, Parkinson's Disease, or amyotrophic lateral sclerosis (ALS).

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 7 OF 7 CA COPYRIGHT 2003 ACS on STN DUPLICATE 1

ACCESSION NUMBER: 91:56595 CA

TITLE: @Diarylallylamines and diarylpropylamines as

antidepressants

PATENT ASSIGNEE(S): Astra Lakemedel AB, Swed. SOURCE: Jpn. Kokai Tokkyo Koho, 23 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PATENT NO.	KIND	DATE		APPLICATION NO.	DATE
JP 54039057	A2	19790324		JP 1978-81818	19780704
GB 1602290	Α	19811111		GB 1977-27992	19770704
F1 7802093	Α	19790105		FI 1978-2093	19780629
FI 64936	В	19831031			
FI´64936	С	19840210			
DK 7802951	Α	19790105		DK 1978-2951	19780629
_AU 7837612	A1	19800103		AU 1978-37612	19780629
"AÚ 519960	B2	19820107			
CA 1111041 .	<b>A1</b>	19811020		CA 1978-306650	19780630
ÍNO 7802305	Α	19790105		NO 1978-2305	19780703
NO 146743	В	19820823			
NO 146743	С	19821201			
AT 7804835	Α	19810115		AT 1978-4835	19780704
AT 363456	В	19810810			
EP 28682	A2	19810520		EP 1980-105028	19800824
EF 28682	<b>A3</b>	19810805			
AT 8004933	A	19820415		AT 1980-4933	19801003
AT 368988	В	19821125			
PRIORITY APPLN. INFO.	:		GB	1977-27992	19770704
			GB	1978-21249	19780522
			EP	1978-850006	19780703
			AT	1978-4835	19780704
CT.					

Diarylallylamines and diarylpropylamines (I, II; R = H, alkyl, alkoxy, halo, CF3, amino; R1 = aryl, pyridyl; R2 = alkyl; R3 = H, alkyl) and their salts were prepd. and were effective antidepressants as tested in mice for noradrenaline and 5-hydroxytryptamine absorption with ED50 of 4.1-100 .mu.mol/kg. Thus, 27.5 g 4-(3-bromophenyl)-4-phenyl-2-butanone oxime was reduced with 3.5 g LiAlH4 in THF at room temp. to give 8.9 g crude II (R = 3-Br, R1 = Ph, R2 = Me, R3 = H) (III), which (7.9 g) was treated with 1.1 g oxalic acid in Me2CHOH to give 4.43 pure III.1/2 oxalate. Similarly prepd. were 24 addnl. I and I.

ANSWER 1 OF 7 USPATFULL on STN

ACCESSION NUMBER: 2002:8522 USPATFULL

TITLE: Compounds active at a novel site on receptor-operated

calcium channels useful for treatment of neurological

disorders and diseases

INVENTOR (S): Mueller, Alan L., Salt Lake City, UT, UNITED STATES

Moe, Scott T., Salt Lake City, UT, UNITED STATES

PATENT ASSIGNEE(S): NPS Pharmaceuticals, Inc. (U.S. corporation)

> NUMBER KIND DATE -----

PATENT INFORMATION:

US 2002004522 A1 20020110 US 2001-825373 A1 20010402

APPLICATION INFO.:

RELATED APPLN. INFO.: Continuation of Ser. No. US 1998-186341, filed on 4 Nov

1998, GRANTED, Pat. No. US 6211245 Continuation of Ser. No. US 1997-873011, filed on 11 Jun 1997, ABANDONED Continuation-in-part of Ser. No. US 1996-763480, filed

on 11 Dec 1996, GRANTED, Pat. No. US 6017965

Continuation-in-part of Ser. No. US 1996-663013, filed on 7 Jun 1996, ABANDONED Continuation-in-part of Ser. No. US 1995-485038, filed on 7 Jun 1995, GRANTED, Pat. No. US 6071970 Continuation-in-part of Ser. No. WO

1994-US12293, filed on 26 Oct 1994, UNKNOWN

Continuation-in-part of Ser. No. US 1994-288688, filed

on 11 Aug 1994, GRANTED, Pat. No. US 5544872 Continuation-in-part of Ser. No. US 1994-194210, filed on 8 Feb 1994, ABANDONED Continuation-in-part of Ser. No. US 1993-14813, filed on 8 Feb 1993, ABANDONED

DOCUMENT TYPE: FILE SEGMENT:

Utility APPLICATION

LEGAL REPRESENTATIVE:

Foley & Lardner, 23rd Floor, 402 W. Broadway, San

Diego, CA, 92101-3542

NUMBER OF CLAIMS: EXEMPLARY CLAIM:

LINE COUNT:

6312

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Method and compositions for treating a patient having a neurological disease or disorder, such as stroke, head trauma, spinal cord injury, spinal cord ischemia, ischemia- or hypoxia-induced nerve cell damage, epilepsy, anxiety, neuropsychiatric or cognitive deficits due to ischemia or hypoxia such as those that frequently occur as a consequence of cardiac surgery under cardiopulmonary bypass, or neurodegenerative diseases such as Alzheimer's Disease, Huntington's Disease, Parkinson's Disease, or amyotrophic lateral sclerosis (ALS).

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 2 OF 7 USPATFULL on STN

ACCESSION NUMBER:

2001:185346 USPATFULL

TITLE:

Compounds active at a novel site on receptor-operated calcium channels useful for treatment of neurological

disorders and diseases

INVENTOR(S):

Mueller, Alan L., Salt Lake City, UT, United States VanWagenen, Bradford C., Salt Lake City, UT, United

States

DelMar, Eric G., Salt Lake City, UT, United States Balandrin, Manuel F., Sandy, UT, United States Moe, Scott T., Salt Lake City, UT, United States

PATENT ASSIGNEE(S):

Artman, Linda D., Salt Lake City, UT, United States NPS Pharmaceuticals, Inc., Salt Lake City, UT, United

States (U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION: US 6306912 B1 20011023 APPLICATION INFO.: US 1995-483294 19950607 (8)

RELATED APPLN. INFO.: Continuation of Ser. No. WO 1994-US12293, filed on 26

Oct 1994 Continuation-in-part of Ser. No. US

1994-288688, filed on 11 Aug 1994, now patented, Pat. No. US 5544872 Continuation-in-part of Ser. No. US 1994-194210, filed on 8 Feb 1994, now abandoned

Continuation-in-part of Ser. No. US 1993-14813, filed

on 8 Feb 1993, now abandoned

DOCUMENT TYPE: Utility FILE SEGMENT: GRANTED

PRIMARY EXAMINER: Celsa, Bennett Hsu, Grace ASSISTANT EXAMINER:

LEGAL REPRESENTATIVE: Warburg, Richard J. Foley & Lardner

NUMBER OF CLAIMS: 12 EXEMPLARY CLAIM: 1 LINE COUNT: 3686

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Method for identifying a compound useful for the therapeutic treatment of a neurological disease or disorder such as stroke, head trauma, spinal cord injury, epilepsy, anxiety, or neurodegenerative diseases such as Alzheimer's Disease, Huntington's Disease or Parkinson's Disease, or useful as a muscle relaxant, analgesic, or adjuvant to general anesthetics. The compound is active on a receptor-operated calcium channel, including, but not limited to, that present as part of an NMDA receptor-ionophore complex, a calcium-permeable AMPA receptor, or a nicotinic cholinergic receptor, as a noncompetitive antagonist. The method includes identifying a compound which binds to the receptor-operated calcium channel at the site bound by the arylalkylamines Compound 1, Compound 2 or Compound 3.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 3 OF 7 USPATFULL on STN

ACCESSION NUMBER:

TITLE:

2001:48118 USPATFULL

Compounds active at a novel site on receptor-operated calcium channels useful for treatment of neurological

disorders and diseases

INVENTOR (S):

Mueller, Alan L., Salt Lake City, UT, United States Moe, Scott T., Salt Lake City, UT, United States

PATENT ASSIGNEE(S):

NPS Pharmaceuticals, Inc., Salt Lake City, UT, United

States (U.S. corporation)

NUMBER KIND DATE US 6211245 B1 20010403 US 1998-186341 19981104 PATENT INFORMATION: APPLICATION INFO.: 19981104 (9)

RELATED APPLN. INFO.:

Continuation of Ser. No. US 1997-873011, filed on 11 Jun 1997 Continuation-in-part of Ser. No. US 1997-869154, filed on 4 Jun 1997, now abandoned Continuation-in-part of Ser. No. US 1996-763480, filed on 11 Dec 1996, now patented, Pat. No. US 6017965 Continuation-in-part of Ser. No. US 1996-663013, filed on 7 Jun 1996, now abandoned Continuation-in-part of Ser. No. US 1995-485038, filed on 7 Jun 1995 Continuation-in-part of Ser. No. WO 1994-US12293, filed

on 26 Oct 1994 Continuation-in-part of Ser. No. US 1994-288668, filed on 9 Aug 1994, now abandoned Continuation-in-part of Ser. No. US 1994-194210, filed on 8 Feb 1994, now abandoned Continuation-in-part of Ser. No. US 1993-14813, filed on 8 Feb 1993, now

abandoned

DOCUMENT TYPE: Utility FILE SEGMENT: Granted PRIMARY EXAMINER: Raymond, Richard L.

NUMBER OF CLAIMS: 45
EXEMPLARY CLAIM: 1
LINE COUNT: 6559

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Method and compositions for treating a patient having a neurological disease or disorder, such as stroke, head trauma, spinal cord injury, spinal cord ischemia, ischemia- or hyproxia-induced nerve cell damage, epilepsy, anxiety, neuropsychiatric or cognitive deficits due to ischemia or hypoxia such as those that frequently occur as a consequence of cardiac surgery under cardiopulmonary bypass, or neurodegenerative diseases such as Alzheimer's Disease, Huntington's Disease, Parkinson's Disease, or amyotrophic lateral sclerosis (ALS).

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 4 OF 7 USPATFULL on STN

ACCESSION NUMBER: 2000:70898 USPATFULL

TITLE: Compounds active at a

Compounds active at a novel site on receptor-operated calcium channels useful for treatment of neurological

disorders and diseases

INVENTOR(S): Mueller, Alan L., Salt Lake City, UT, United States

Balandrin, Manuel F., Sandy, UT, United States VanWagenen, Bradford C., Salt Lake City, UT, United

States

DelMar, Eric G., Salt Lake City, UT, United States Moe, Scott T., Salt Lake City, UT, United States Artman, Linda D., Salt Lake City, UT, United States Barmore, Robert M., Salt Lake City, UT, United States

PATENT ASSIGNEE(S): NPS Pharmaceuticals, Inc., Salt Lake City, UT, United

States (U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION: US 6071970 20000606
APPLICATION INFO: US 1995-485038 19950607 (8)
RELATED APPLIN INFO: Continue (Continue 
RELATED APPLN. INFO.: Continuation-in-part of Ser. No. WO 1994-US12293, filed on 26 Oct 1994 which is a continuation-in-part of Ser.

on 26 Oct 1994 which is a continuation-in-part of Ser. No. US 1994-288668, filed on 9 Aug 1994, now abandoned

which is a continuation-in-part of Ser. No. US

1994-194210, filed on 8 Feb 1994, now abandoned which is a continuation-in-part of Ser. No. US 1993-14813,

filed on 8 Feb 1993, now abandoned

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

PRIMARY EXAMINER: Raymond, Richard L. LEGAL REPRESENTATIVE: Lyon & Lyon LLP

NUMBER OF CLAIMS: 185 EXEMPLARY CLAIM: 1 LINE COUNT: 5430

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Method and compositions for treating a patient having a neurological disease or disorder, such as stroke, head trauma, spinal cord injury, epilepsy, anxiety, or neurodegenerative diseases such as Alzheimer's Disease, Huntington's Disease, Parkinson's Disease, or amyotrophic lateral sclerosis (ALS).

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 5 OF 7 USPATFULL on STN

ACCESSION NUMBER: 2000:47267 USPATFULL

TITLE: Compounds active at a novel site on receptor-operated calcium channels useful for treatment of neurological

diagradure and discourse to treatment of heurologic

disorders and diseases

INVENTOR (S):

Mueller, Alan L., Salt Lake City, UT, United States

Balandrin, Manuel F., Sandy, UT, United States

Van Wagenen, Bradford C., Salt Lake City, UT, United

States

DelMar, Eric G., Salt Lake City, UT, United States Moe, Scott T., Salt Lake City, UT, United States Artman, Linda D., Salt Lake City, UT, United States Barmore, Robert M., Salt Lake City, UT, United States NPS Pharmaceuticals, Inc., Salt Lake City, UT, United

PATENT ASSIGNEE(S):

States (U.S. corporation)

NUMBER KIND DATE -----

PATENT INFORMATION: APPLICATION INFO.:

US 6051610 US 1999-252433 20000418 19990218 (9)

RELATED APPLN. INFO.:

Continuation of Ser. No. US 1995-485038, filed on 7 Jun

1995 which is a continuation-in-part of Ser. No. WO

1994-US12293, filed on 26 Oct 1994 which is a

continuation-in-part of Ser. No. US 1994-288668, filed

on 9 Aug 1994, now abandoned which is a

continuation-in-part of Ser. No. US 1994-194210, filed

on 8 Feb 1994, now abandoned which is a

continuation-in-part of Ser. No. US 1993-14813, filed

on 8 Feb 1993, now abandoned

DOCUMENT TYPE:

Utility Granted

FILE SEGMENT: PRIMARY EXAMINER:

Raymond, Richard L.

LEGAL REPRESENTATIVE:

Lyon & Lyon LLP

NUMBER OF CLAIMS: EXEMPLARY CLAIM:

24

LINE COUNT:

4670

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Method and compositions for treating a patient having a neurological disease or disorder, such as stroke, head trauma, spinal cord injury, epilepsy, anxiety, or neurodegenerative diseases such as Alzheimer's Disease, Huntington's Disease, Parkinson's Disease, or amyotrophic

lateral sclerosis (ALS).

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 6 OF 7 USPATFULL on STN

ACCESSION NUMBER:

2000:9954 USPATFULL

TITLE:

Compounds active at a novel site on receptor-operated calcium channels useful for treatment of neurological

disorders and diseases

INVENTOR(S):

Mueller, Alan L., Salt Lake City, UT, United States Balandrin, Manuel F., Sandy, UT, United States VanWagenen, Bradford C., Salt Lake City, UT, United

States

Moe, Scott T., Salt Lake City, UT, United States DelMar, Eric G., Salt Lake City, UT, United States Artman, Linda D., Salt Lake City, UT, United States Barmore, Robert M., Salt Lake City, UT, United States Smith, Daryl L., Salt Lake City, UT, United States

PATENT ASSIGNEE(S):

NPS Pharmaceuticals, Inc., Salt Lake City, UT, United

States (U.S. corporation)

NUMBER KIND DATE -----

PATENT INFORMATION:

US 1996-763480 20000125 19961211 (8)

APPLICATION INFO.: RELATED APPLN. INFO.:

Continuation-in-part of Ser. No. US 1996-663013, filed on 7 Jun 1996 which is a continuation-in-part of Ser. No. US 1995-485038, filed on 7 Jun 1995 which is a

continuation-in-part of Ser. No. WO 1994-US12293, filed on 26 Oct 1994 which is a continuation-in-part of Ser. No. US 1994-288668, filed on 9 Aug 1994, now abandoned which is a continuation-in-part of Ser. No. US 1994-194210, filed on 8 Feb 1994, now abandoned which is a continuation-in-part of Ser. No. US 1993-14813, filed on 8 Feb 1993, now abandoned

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

PRIMARY EXAMINER: Raymond, Richard L. LEGAL REPRESENTATIVE: Lyon & Lyon LLP

NUMBER OF CLAIMS: 35 EXEMPLARY CLAIM: 1 LINE COUNT: 6207

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Method and compositions for treating a patient having a neurological disease or disorder, such as stroke, head trauma, spinal cord injury, spinal cord ischemia, ischemia- or hypoxia-induced nerve cell damage, epilepsy, anxiety, neuropsychiatric or cognitive deficits due to ischemia or hypoxia such as those that frequently occur as a consequence of cardiac surgery under cardiopulmonary bypass, or neurodegenerative diseases such as Alzheimer's Disease, Huntington's Disease, Parkinson's Disease, or amyotrophic lateral sclerosis (ALS).

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 7 OF 7 CA COPYRIGHT 2003 ACS on STN DUPLICATE 1

ACCESSION NUMBER: 91:56595 CA

TITLE: Diarylallylamines and diarylpropylamines as

antidepressants

PATENT ASSIGNEE(S): Astra Lakemedel AB, Swed.

SOURCE: Jpn. Kokai Tokkyo Koho, 23 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 54039057	A2	19790324	JP 1978-81818	19780704
✓ GB 1602290	Α	19811111	GB 1977-27992	19770704
FI 7802093	Α	19790105	FI 1978-2093	19780629
FI 64936	В	19831031		
FI 64936	C	19840210		
DK 7802951	Α	19790105	DK 1978-2951	19780629
AU 7837612	A1	19800103	AU 1978-37612	19780629
AU 519960	B2	19820107		
CA 1111041	A1	19811020	CA 1978-306650	19780630
NO 7802305	Α	19790105	NO 1978-2305	19780703
NO 146743	В	19820823		
NO 146743	C	19821201	•	
AT 7804835	Α	19810115	AT 1978-4835	19780704
AT 363456	В	19810810		
✓ EP 28682	A2	19810520	EP 1980-105028	19800824
EP 28682	A3	19810805		
AT 8004933	Α	19820415	AT 1980-4933	19801003
AT 368988	В	19821125		
PRIORITY APPLN. INFO.	:		GB 1977-27992	19770704
			GB 1978-21249	19780522
			EP 1978-850006	19780703
			AT 1978-4835	19780704
CT				

Diarylallylamines and diarylpropylamines (I, II; R = H, alkyl, alkoxy, halo, CF3, amino; R1 = aryl, pyridyl; R2 = alkyl; R3 = H, alkyl) and their salts were prepd. and were effective antidepressants as tested in mice for noradrenaline and 5-hydroxytryptamine absorption with ED50 of 4.1-100 .mu.mol/kg. Thus, 27.5 g 4-(3-bromophenyl)-4-phenyl-2-butanone oxime was reduced with 3.5 g LiAlH4 in THF at room temp. to give 8.9 g crude II (R = 3-Br, R1 = Ph, R2 = Me, R3 = H) (III), which (7.9 g) was treated with 1.1 g oxalic acid in Me2CHOH to give 4.43 pure III.1/2 oxalate. Similarly prepd. were 24 addnl. I and I.

1 ANSWER 1 OF 4 USPATFULL on STN

ACCESSION NUMBER: 2002:8522 USPATFULL

Compounds active at a novel site on receptor-operated TITLE:

calcium channels useful for treatment of neurological

disorders and diseases

INVENTOR(S): Mueller, Alan L., Salt Lake City, UT, UNITED STATES

Moe, Scott T., Salt Lake City, UT, UNITED STATES

PATENT ASSIGNEE(S): NPS Pharmaceuticals, Inc. (U.S. corporation)

> NUMBER KIND DATE -----

US 2002004522 A1 20020110 US 2001-825373 A1 20010402 PATENT INFORMATION: APPLICATION INFO.:

Continuation of Ser. No. US 1998-186341, filed on 4 Nov RELATED APPLN. INFO.:

> 1998, GRANTED, Pat. No. US 6211245 Continuation of Ser. No. US 1997-873011, filed on 11 Jun 1997, ABANDONED Continuation-in-part of Ser. No. US 1996-763480, filed

(9)

on 11 Dec 1996, GRANTED, Pat. No. US 6017965

Continuation-in-part of Ser. No. US 1996-663013, filed on 7 Jun 1996, ABANDONED Continuation-in-part of Ser. No. US 1995-485038, filed on 7 Jun 1995, GRANTED, Pat. No. US 6071970 Continuation-in-part of Ser. No. WO

1994-US12293, filed on 26 Oct 1994, UNKNOWN

Continuation-in-part of Ser. No. US 1994-288688, filed

on 11 Aug 1994, GRANTED, Pat. No. US 5544872

Continuation-in-part of Ser. No. US 1994-194210, filed on 8 Feb 1994, ABANDONED Continuation-in-part of Ser.

No. US 1993-14813, filed on 8 Feb 1993, ABANDONED

DOCUMENT TYPE: Utility FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: Foley & Lardner, 23rd Floor, 402 W. Broadway, San

Diego, CA, 92101-3542

NUMBER OF CLAIMS: 31 EXEMPLARY CLAIM: 1 LINE COUNT: 6312

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Method and compositions for treating a patient having a neurological AB disease or disorder, such as stroke, head trauma, spinal cord injury, spinal cord ischemia, ischemia- or hypoxia-induced nerve cell damage, epilepsy, anxiety, neuropsychiatric or cognitive deficits due to ischemia or hypoxia such as those that frequently occur as a consequence of cardiac surgery under cardiopulmonary bypass, or neurodegenerative diseases such as Alzheimer's Disease, Huntington's Disease, Parkinson's Disease, or amyotrophic lateral sclerosis (ALS).

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L11 ANSWER 2 OF 4 USPATFULL on STN

ACCESSION NUMBER: 2001:185346 USPATFULL

TITLE: Compounds active at a novel site on receptor-operated

calcium channels useful for treatment of neurological

disorders and diseases

INVENTOR(S): Mueller, Alan L., Salt Lake City, UT, United States

VanWagenen, Bradford C., Salt Lake City, UT, United

States

DelMar, Eric G., Salt Lake City, UT, United States Balandrin, Manuel F., Sandy, UT, United States Moe, Scott T., Salt Lake City, UT, United States Artman, Linda D., Salt Lake City, UT, United States

PATENT ASSIGNEE(S):

NPS Pharmaceuticals, Inc., Salt Lake City, UT, United

States (U.S. corporation)

NUMBER KIND DATE ----- ----- ---- ---- PATENT INFORMATION: US 6306912 B1 20011023 US 1995-483294 APPLICATION INFO.: 19950607 (8)

RELATED APPLN. INFO.: Continuation of Ser. No. WO 1994-US12293, filed on 26

Oct 1994 Continuation-in-part of Ser. No. US

1994-288688, filed on 11 Aug 1994, now patented, Pat. No. US 5544872 Continuation-in-part of Ser. No. US 1994-194210, filed on 8 Feb 1994, now abandoned

Continuation-in-part of Ser. No. US 1993-14813, filed

on 8 Feb 1993, now abandoned

DOCUMENT TYPE: Utility FILE SEGMENT: GRANTED

PRIMARY EXAMINER: Celsa, Bennett ASSISTANT EXAMINER: Hsu, Grace

LEGAL REPRESENTATIVE: Warburg, Richard J. Foley & Lardner

NUMBER OF CLAIMS: 12 EXEMPLARY CLAIM: 1 LINE COUNT: 3686

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Method for identifying a compound useful for the therapeutic treatment of a neurological disease or disorder such as stroke, head trauma, spinal cord injury, epilepsy, anxiety, or neurodegenerative diseases such as Alzheimer's Disease, Huntington's Disease or Parkinson's Disease, or useful as a muscle relaxant, analgesic, or adjuvant to general anesthetics. The compound is active on a receptor-operated calcium channel, including, but not limited to, that present as part of an NMDA receptor-ionophore complex, a calcium-permeable AMPA receptor, or a nicotinic cholinergic receptor, as a noncompetitive antagonist. The method includes identifying a compound which binds to the receptor-operated calcium channel at the site bound by the arylalkylamines Compound 1, Compound 2 or Compound 3.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L11 ANSWER 3 OF 4 USPATFULL on STN

ACCESSION NUMBER: 2001:48118 USPATFULL

TITLE:

Compounds active at a novel site on receptor-operated

calcium channels useful for treatment of neurological

disorders and diseases

INVENTOR(S):

Mueller, Alan L., Salt Lake City, UT, United States

Moe, Scott T., Salt Lake City, UT, United States NPS Pharmaceuticals, Inc., Salt Lake City, UT, United

PATENT ASSIGNEE(S): States (U.S. corporation)

> NUMBER KIND DATE

----- ----- ----- ----- -----PATENT INFORMATION: US 6211245 B1 20010403 APPLICATION INFO.: US 1998-186341 19981104 (9)

Continuation of Ser. No. US 1997-873011, filed on 11 RELATED APPLN. INFO.: Jun 1997 Continuation-in-part of Ser. No. US

1997-869154, filed on 4 Jun 1997, now abandoned

Continuation-in-part of Ser. No. US 1996-763480, filed on 11 Dec 1996, now patented, Pat. No. US 6017965 Continuation-in-part of Ser. No. US 1996-663013, filed on 7 Jun 1996, now abandoned Continuation-in-part of

Ser. No. US 1995-485038, filed on 7 Jun 1995

Continuation-in-part of Ser. No. WO 1994-US12293, filed on 26 Oct 1994 Continuation-in-part of Ser. No. US 1994-288668, filed on 9 Aug 1994, now abandoned

Continuation-in-part of Ser. No. US 1994-194210, filed on 8 Feb 1994, now abandoned Continuation-in-part of Ser. No. US 1993-14813, filed on 8 Feb 1993, now

abandoned

DOCUMENT TYPE: Utility FILE SEGMENT: Granted PRIMARY EXAMINER: Raymond, Richard L.

NUMBER OF CLAIMS: 45 EXEMPLARY CLAIM: LINE COUNT: 6559

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Method and compositions for treating a patient having a neurological disease or disorder, such as stroke, head trauma, spinal cord injury, spinal cord ischemia, ischemia- or hyproxia-induced nerve cell damage, epilepsy, anxiety, neuropsychiatric or cognitive deficits due to ischemia or hypoxia such as those that frequently occur as a consequence of cardiac surgery under cardiopulmonary bypass, or neurodegenerative diseases such as Alzheimer's Disease, Huntington's Disease, Parkinson's Disease, or amyotrophic lateral sclerosis (ALS).

#### CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L11 ANSWER 4 OF 4 USPATFULL on STN

2000:47267 USPATFULL ACCESSION NUMBER:

TITLE: Compounds active at a novel site on receptor-operated

calcium channels useful for treatment of neurological

disorders and diseases

INVENTOR (S):

Mueller, Alan L., Salt Lake City, UT, United States Balandrin, Manuel F., Sandy, UT, United States Van Wagenen, Bradford C., Salt Lake City, UT, United

States

DelMar, Eric G., Salt Lake City, UT, United States Moe, Scott T., Salt Lake City, UT, United States Artman, Linda D., Salt Lake City, UT, United States Barmore, Robert M., Salt Lake City, UT, United States

PATENT ASSIGNEE(S): NPS Pharmaceuticals, Inc., Salt Lake City, UT, United

States (U.S. corporation)

NUMBER KIND DATE -----

PATENT INFORMATION: US 6051610 20000418 APPLICATION INFO .: US 1999-252433 19990218 (9)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1995-485038, filed on 7 Jun

1995 which is a continuation-in-part of Ser. No. WO

1994-US12293, filed on 26 Oct 1994 which is a

continuation-in-part of Ser. No. US 1994-288668, filed

on 9 Aug 1994, now abandoned which is a

continuation-in-part of Ser. No. US 1994-194210, filed

on 8 Feb 1994, now abandoned which is a

continuation-in-part of Ser. No. US 1993-14813, filed

on 8 Feb 1993, now abandoned

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

PRIMARY EXAMINER: Raymond, Richard L. LEGAL REPRESENTATIVE: Lyon & Lyon LLP

NUMBER OF CLAIMS: 24 EXEMPLARY CLAIM: 1 LINE COUNT: 4670

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Method and compositions for treating a patient having a neurological disease or disorder, such as stroke, head trauma, spinal cord injury, epilepsy, anxiety, or neurodegenerative diseases such as Alzheimer's Disease, Huntington's Disease, Parkinson's Disease, or amyotrophic lateral sclerosis (ALS).

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 1 OF 36 USPATFULL on STN

ACCESSION NUMBER:

2002:8522 USPATFULL

TITLE:

Compounds active at a novel site on receptor-operated calcium channels useful for treatment of neurological

disorders and diseases

INVENTOR (S):

Mueller, Alan L., Salt Lake City, UT, UNITED STATES Moe, Scott T., Salt Lake City, UT, UNITED STATES

PATENT ASSIGNEE (S): NPS Pharmaceuticals, Inc. (U.S. corporation)

> NUMBER KIND DATE -----

PATENT INFORMATION: APPLICATION INFO.: RELATED APPLN. INFO.: US 2002004522 A1 20020110 US 2001-825373 A1 20010402 (9)

Continuation of Ser. No. US 1998-186341, filed on 4 Nov 1998, GRANTED, Pat. No. US 6211245 Continuation of Ser. No. US 1997-873011, filed on 11 Jun 1997, ABANDONED Continuation-in-part of Ser. No. US 1996-763480, filed

on 11 Dec 1996, GRANTED, Pat. No. US 6017965

Continuation-in-part of Ser. No. US 1996-663013, filed on 7 Jun 1996, ABANDONED Continuation-in-part of Ser. No. US\1995-485038, filed on 7 Jun 1995, GRANTED, Pat. No. US 6071970 Continuation-in-part of Ser. No. WO

1994-US12293, filed on 26 Oct 1994, UNKNOWN

Continuation-in-part of Ser. No. US 1994-288688, filed

on 11 Aug 1994, GRANTED, Pat. No. US 5544872

Continuation-in-part of Ser. No. US 1994-194210, filed on 8 Feb 1994, ABANDONED Continuation-in-part of Ser.

No. US 1993-14813, filed on 8 Feb 1993, ABANDONED

DOCUMENT TYPE: FILE SEGMENT:

Utility APPLICATION

LEGAL REPRESENTATIVE:

Foley & Lardner, 23rd Floor, 402 W. Broadway, San

Diego, CA, 92101-3542

NUMBER OF CLAIMS: EXEMPLARY CLAIM:

31

LINE COUNT:

6312

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Method and compositions for treating a patient having a neurological disease or disorder, such as stroke, head trauma, spinal cord injury, spinal cord ischemia, ischemia- or hypoxia induced nerve cell damage, epilepsy, anxiety, neuropsychiatric or cognitive deficits due to ischemia or hypoxia such as those that frequently occur as a consequence of cardiac surgery under cardiopulmonary bypas's, or neurodegenerative diseases such as Alzheimer's Disease, Huntington's Disease, Parkinson's Disease, or amyotrophic lateral sclerosis (ALS).

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 2 OF 36 USPATFULL on STN

ACCESSION NUMBER:

2001:185346 USPATFULL

TITLE:

Compounds active at a novel site on receptor-operated calcium channels useful for treatment of neurological

disorders and diseases

INVENTOR(S):

Mueller Alan L., Salt Lake City, UT, United States VanWagenèn, Bradford C., Salt Lake City, UT, United

States

DelMar, Eric G., Salt Lake City, UT, United States Balandrin, Manuel F., Sandy, UT, United States Moe, Scott T., Salt Lake City, UT, United States Artman, Linda D., Salt Lake City, UT, United States

PATENT ASSIGNEE(S): NPS Pharmaceuticals, Inc., Salt Lake City, UT, United States (U.S. corporation)

> NUMBER KIND DATE

PATENT INFORMATION: US 6306912 B1 20011023 APPLICATION INFO.: US 1995-483294 19950607 (8)

RELATED APPLN. INFO.: Continuation of Ser. No. WO 1994-US12293, filed on 26

> Oct 1994 Continuation-in-part of Ser. No. US 1994-288688, filed on 11 Aug 1994, now patented, Pat.

> No. US 5544872 Continuation-in-part of Ser. No. US 1994-194210, filed on 8 Feb 1994, now abandoned Continuation-in-part of Ser. No. US 1993-14813, filed

on 8 Feb 1993, now abandoned

DOCUMENT TYPE: Utility FILE SEGMENT: GRANTED

PRIMARY EXAMINER: Celsa, Bennett ASSISTANT EXAMINER: Hsu, Grace

LEGAL REPRESENTATIVE: Warburg, Richard J. Foley & Lardner

NUMBER OF CLAIMS: 12 EXEMPLARY CLAIM: LINE COUNT: 3686

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Method for identifying a compound useful for the therapeutic treatment ΔR of a neurological disease or disorder such as stroke, head trauma, spinal cord injury, epilepsy, anxiety, or neurodegenerative diseases such as Alzheimer's Disease, Huntington's Disease or Parkinson's Disease, or useful as a muscle relaxant, analgesic, or adjuvant to general anesthetics. The compound is active on a receptor-operated calcium channel, including, but not limited to, that present as part of am NMDA receptor-ionophore complex, a calcium-permeable AMPA receptor, or a nicotinic cholinergic receptor, as a noncompetitive antagonist. The method includes identifying a compound which binds to the receptor-operated calcium channel at the site bound by the arylalkylamines Compound 1, Compound 2 or Compound 3.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 3 OF 36 U\$PATFULL on STN

ACCESSION NUMBER: 2001:48118 USPATFULL

TITLE:

PATENT ASSIGNEE(S):

Compounds active at a novel site on receptor-operated

calcium channels useful for treatment of neurological

disorders and diseases

INVENTOR (S): Mueller, Alan L., Salt Lake City, UT, United States Moe, Scott T., Salt Lake City, UT, United States

NPS Pharmaceuticals, Inc., Salt Lake City, UT, United

States (U.S. corporation)

NUMBER KIND DATE US 6211245 B1 20010403

PATENT INFORMATION: US 1998\7186341 APPLICATION INFO.: 19981104 (9) RELATED APPLN. INFO.: Continuation of Ser. No. US 1997-873011, filed on 11

Jun 1997 Continuation-in-part of Ser. No. US 1997-869154, filed on 4 Jun 1997, now abandoned Continuation-in-part of Ser. No. US 1996-763480, filed on 11 Dec 1996, now patented, Pat. No. US 6017965 Continuation in-part of Ser. No. US 1996-663013, filed on 7 Jun 1996, now abandoned Continuation-in-part of Ser. No. US 1995-485038, filed on 7 Jun 1995 Continuation-in-part of Ser. No. WO 1994-US12293, filed

on 26 Oct 1994 Continuation-in-part of Ser. No. US 1994-288668, filed on 9 Aug 1994, now abandoned Continuation-in-part of Ser. No. US 1994-194210, filed

on 8 Feb 1994, now abandoned Continuation-in-part of Ser. No. US 1993-14813, filed on 8 Feb 1993, now

abandoned

Utility Granted

DOCUMENT TYPE: FILE SEGMENT:

Raymond, Richard L. PRIMARY EXAMINER:

NUMBER OF CLAIMS: 45 EXEMPLARY CLAIM: 1 LINE COUNT: 6559

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Method and compositions for treating a patient having a neurological disease or disorder, such as stroke, head trauma, spinal cord injury, spinal cord ischemia, ischemia- or hyproxid-induced nerve cell damage, epilepsy, anxiety, neuropsychiatric or cognitive deficits due to ischemia or hypoxia such as those that frequently occur as a consequence of cardiac surgery under cardiopulmonary bypass, or neurodegenerative diseases such as Alzheimer's Disease, Huntington's Disease, Parkinson's Disease, or amyotrophic lateral sclerosis (AL\$).

#### CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 4 OF 36 CA COPYRIGHT 2003 ACS on STN DUPLICATE 1

ACCESSION NUMBER: 133:30571 CA

TITLE: Preparation of aralkylamines active at

receptor-operated calcium channels as neuroprotectants INVENTOR (S): Mueller, Alan L.; Balandrin, Manuel F.; Vanwagenen,

Bradford C.; Delmar, Eric G.; Moe, Scott T.; Artman,

Linda D.; Barmore, Robert M.

NPS Pharmaceuticals, Inc., USA PATENT ASSIGNEE(S):

SOURCE: U.S., 133 pp., Cont.-in-part of WO 9511663.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English 6

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION: מא ייניאיי אר

PATENT NO.	KIND DATE	APPLICATION NO. DATE
US 6071970	A 20000606	US 1995-485038 19950607
		CA 1994-2182680 19941026
WO 9521612	A2 19950817	WO 1994-US12293 19941026
WO 9521612	A3 19950921	
W: AM, AT	, AU, BB, BG, BR,	BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI,
GB, GE	, HU, JP, KE, KG,	KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG,
MN, MW	, NL, NO, NZ, PL,	PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA,
US, US		
RW: KE, MW	, SD, SZ, AT, BE,	CH, DE, DK, ES, FR, GB, GR, IE, IT, LU,
MC, NL	, PT, SE, BF, BJ,	CF, CG, CI, CM, GA, GN, ML, MR, NE, SN,
TD, TG		
CN 1148337	A 19970423	CN 1994-195074 19941026
CN 1088585	B 20020807	
ES 2156162	T3 20010616	ES 1994-932057 19941026 EP 2000-121960 19941026
EP 1123922	A2 20010816	EP 2000-121960 19941026
R: AT, BE,	, CH, DE, DK, ES,	FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE
CA 2223978	AA 19961219	CA 1996-2223978 19960607
WO 9640097	A1 19961219	WO 1996-US10201 19960607
W: AL, AM,	, AT, AU, AZ, BB,	BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE,
ES, FI,	, GB, GE, HU, IS,	JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT,
	, MD, MG, MK, MN,	MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE,
SG, SI		
RW: AT, BE,	, CH, DE, DK, ES,	FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
AU 9661125	A1 19961230	AU 1996-61125 19960607
AU 716122	B2 20000217	
EP 831799	A1 19980401	EP 1996-918477 19960607
	B1 20030502	
R: AT, BE,	, CH, DE, DK, ES,	FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, FI	1.000000	
CN 1192679	A 19980909	CN 1996-196042 19960607 JP 1996-502238 19960607
UP 11506469	12 19990608	JP 1996-502238 19960607
JP 11506469	T2 19990608	JP 1996-502238 19960607

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NZ 310344
                    A 20010330
E 20030515
                                        NZ 1996-310344 19960607
     AT 238782
                                        AT 1996-918477 19960607
     PL 185492
                    B1 20030530
                                        PL 1996-323871 19960607
     US 6017965
                     Α
                          20000125
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     US 6211245
                     B1 20010403
                                        US 1998-186341 19981104
     US 6051610
                     Α
                          20000418
                                        US 1999-252433 19990218
     US 2002004522 A1 20020110
                                         US 2001-825373 20010402
PRIORITY APPLN. INFO.:
                                      US 1993-14813 B2 19930208
                                      US 1994-194210 B2 19940208
                                      US 1994-288668 B2 19940809
                                      WO 1994-US12293 A2 19941026
                                      US 1994-288688 A2 19940811
                                      EP 1994-932057 A3 19941026
                                      US 1995-485038 A 19950607
                                      US 1996-663013
                                                     A2 19960607
                                      WO 1996-US10201 W 19960607
                                      US 1996-763480 A2 19961211
                                      US 1997-869154
                                                      B2 19970604
                                      US 1997-873011
                                                      A1 19970611
                                      US 1998-186341 A1 19981104
OTHER SOURCE(S):
                       MARPAT 133:30571
     Title compds., e.g., RCHR4CR1R5CR2R6R7 [R = (un) substituted Ph; R1, R5 = H,
     OH, (hydroxy)alkyl, alkoxy, acyloxy; R2,R6 = H or hydroxyalkyl; R1R2 =
     (CH2) n \text{ or } (CH2) nNR3; R3 = H, alkyl, CH2CH2OH; R4 = (cyclo) alkyl, or
     (un) substituted Ph; R7 = N(R3)2; R7 = H when R1R2 = (CH2) nNR3; n = 1-6]
     were prepd. Thus, (4-FC6H4)2CO was condensed with (EtO)2P(O)CH2CN and the
    product converted in 2 redn. steps to (4-FC6H4)2CHCH2CH2NH2. Data for
    biol. activity of title compds. were given.
REFERENCE COUNT:
                              THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS
                        41
                              RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT
    ANSWER 5 OF 36 CA COPYRIGHT 2003 ACS on STN
                                                   DUPLICATE 2
ACCESSION NUMBER:
                        132:107773 CA
TITLE:
                        Preparation of aralkylamines as NMDA
                        receptor-ionophore complex antagonists
INVENTOR (S):
                        Mueller, Alan L.; Balandrin, Manuel F.; Vanwagenen,
                        Bradford C.; Moe, Scott T.; Delmar, Eric G.; Artman,
                        Linda D.; Barmore, Robert M.; Smith, Daryl L.
PATENT ASSIGNEE(S):
                        NPS Pharmaceuticals, Inc., USA
SOURCE:
                        U.S., 112 pp., Cont.-in-part of U.S. Ser. No. 663.013.
                        CODEN: USXXAM
DOCUMENT TYPE:
                        Patent
LANGUAGE:
                        English
FAMILY ACC. NUM. COUNT: 6
PATENT INFORMATION:
                 KIND DATE
    PATENT NO.
                                       APPLICATION NO. DATE
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    US 6017965
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                          20000125
                                       US 1996-763480 19961211
    CA 2182680
                     AA
                          19950817
                                       CA 1994-2182680 19941026
                    A2 19950817
A3 (19950921
    WO 9521612
                                        WO 1994-US12293 19941026
    WO 9521612
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            GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG,
            MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA,
            US, US
        RW: KE, MW, SD, SZ, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU,
            MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN,
            TD, TG
    CN 1148337
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                          19970423
                                        CN 1994-195074
                                                         19941026
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                    Т3
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19990706

BR 1996-9019

19960607

19941026

19941026

EP 2000-121960

Α

BR 9609019

EP 1123922

A2

20010816

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US 6071970 A 20000606 US 1995-485038 19950607
     CA 2257234
                      AA
                          19971211
                                          CA 1996-2257234 19961211
     US 6211245
                      B1 20010403
                                         US 1998-186341 19981104
     US 2002004522
                     A1 20020110
                                          US 2001-825373 20010402
PRIORITY APPLN. INFO.:
                                      US 1993-14813 B2 19930208
                                       US 1994-194210 B2 19940208
                                       US 1994-288668 B2 19940809
                                       WO 1994-US12293 A2 19941026
                                       US 1995-485038 A2 19950607
                                       US 1996-663013 A2 19960607
                                       US 1994-288688 A2 19940811
                                       EP 1994-932057 A3 19941026
                                       WO 1996-US19525 A 19961206
                                       US 1996-763480 A2 19961211
                                       US 1997-869154 B2 19970604
                                       US 1997-873011 A1 19970611
                                       US 1998-186341 A1 19981104
OTHER SOURCE(S):
                        MARPAT 132:107773
     R7CHR4CR1R5CRR2R6[I; R = H or N(R3)2; R1,R5 = (un)substituted Ph, -CH2Ph,
     -OPh; R2,R6 = H or (hydroxy)alkyl; R1R2 = (CH2)n or (CH2)nNR3(CH2)n; R2R6
     = NH; R3 = H, alkyl, CH2CH2OH, alkylphenyl; R4 = (un)substituted Ph,
     -pyridyl, -thienyl, etc.; R7 = (un)substituted Ph; n = 0-6] were prepd.
     Thus, (3-FC6H4)2CO was condensed with (EtO)2P(O)CH2CO2Et and the product
     converted in 6 steps to (3-FC6H4)2CHCH2CHMeNH2. Data for biol. activity
     of I were given.
REFERENCE COUNT:
                        172
                              THERE ARE 172 CITED REFERENCES AVAILABLE FOR
                              THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE
                              FORMAT
     ANSWER 6 OF 36 USPATFULL on STN
ACCESSION NUMBER:
                       2000:47267 USPATFULL
TITLE:
                       Compounds active at a novel site on receptor-operated
                       calcium channels useful for treatment of neurological
                       disorders and diseases
INVENTOR(S):
                       Mueller, Alan L., Salt Lake City, UT, United States
                       Balandrin, Manuel F., Sandy, UT, United States
                       Van Wagenen, Bradford C., Salt Lake City, UT, United
                       States
                       DelMar, Eric G., Salt Lake City, UT, United States
                       Moe, Scott T., Salt Lake City, UT, United States
                       Artman, Linda D., Salt Lake City, UT, United States
                       Barmore, Robert M., Salt Lake City, UT, United States
PATENT ASSIGNEE(S):
                       NPS Pharmaceuticals, Inc., Salt Lake City, UT, United
                       States (U.S. corporation)
                            NUMBER
                                        KIND DATE
                       US 6051610
US 1999-252433
PATENT INFORMATION:
                                              20000418
APPLICATION INFO.:
                       US 1999-252433
                                              19990218 (9)
RELATED APPLN. INFO.:
                       Continuation of Ser. No. US 1995-485038, filed on 7 Jun
                       1995 which is a continuation-in-part of Ser. No. WO
                       1994-US12293, filed on 26 Oct 1994 which is a
                       continuation-in-part of Ser. No. US 1994-288668, filed
                       on 9 Aug 1994, now abandoned which is a
                       continuation-in-part of Ser. No. US 1994-194210, filed
                       on 8 Feb 1994, now abandoned which is a
                       continuation-in-part of Ser. No. US 1993-14813, filed
                       on 8 Feb 1993, now abandoned
DOCUMENT TYPE:
                       Utility
FILE SEGMENT:
                       Granted
PRIMARY EXAMINER:
                       Raymond, Richard L.
LEGAL REPRESENTATIVE:
                       Lyon & Lyon LLP
```

NUMBER OF CLAIMS:

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE

EXEMPLARY CLAIM:

LINE COUNT:

4670

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Method and compositions for treating a patient having a neurological

disease or disorder, such as stroke, head trauma, spinal cord injury, epilepsy, anxiety, or neurodegenerative diseases such as Alzheimer's Disease, Huntington's Disease, Parkinson's Disease, or amyotrophic lateral sclerosis (ALS).

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 7 OF 36

CA COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER

134:85983 CA

TITLE:

Chiral synthesis and pharmacological evaluation of NPS 1407: a potent, stereoselective NMDA receptor

antagonist

AUTHOR (S):

Moe, Scott T.; Smith, Daryl L.; DelMar, Eric G.;

Shimizu, Scot M.; Van Wagenen, Bradford C.; Balandrin, Manuel F.; Chien, Yongwei; Raszkiewicz, Joanna L.; Artman, Linda D.; White, H. Steve; Mueller, Alan L.

Medicinal Chemistry Pharmacology Groups, NPS

Pharmaceuticals, Inc., Salt Lake City, UT, 84108, USA

SOURCE:

Bioorganic & Medicinal Chemistry Letters (2000),

 $1\lambda(21)$ , 2411-2415

CODEN: BMCLE8; ISSN: 0960-894X

Elsevier Science Ltd.

PUBLISHER:

DOCUMENT TYPE:

LANGUAGE:

CORPORATE SOURCE:

OTHER SOURCE(S):

Journal English

Ι

CASREACT 134:85983

The stereoselective synthesis and biol. activity of NPS 1407 (I), a potent, stereoselective antagonist of the NMDA receptor, was described. AB (.+-.)-I was found to be active at the NMDA receptor in an in vitro assay, prompting the synthesis of the individual stereoisomers. I was found to be 12 times more potent than its R enantiomer \and demonstrated in vivo pharmacol. activity in neuroprotection and anticonvulsant assays.

REFERENCE COUNT:

24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ACCESSION NUMBER:

TITLE:

ANSWER 8 OF 36 CA COPYRIGHT 2003 ACS on STN 132:44496 CA

Improved alignment by weighted field fit in CoMFA of

histamine H2 receptor agonistic imidazolylpropylguanidines

AUTHOR (S):

Dove, Stefan; Buschauer, Armin

CORPORATE SOURCE:

Institute of Pharmacy, University Regensburg,

Regensburg, D-93040, Germany

SOURCE:

Quantitative Structure-Activity Relationships (1999),

18(4), 329-341

CODEN: QSARDI; ISSN: 0931-8771

PUBLISHER:

Wiley-VCH Verlag GmbH

DOCUMENT TYPE: LANGUAGE:

Jouknal Engl\sh

More realistic description of ligand-receptor interactions in COMFA results from alignments considering surface and field properties instead of only mol. frameworks. The field fit algorithm implemented in SYBYL (Tripos Ass.) as part of the energy minimizer provides the possibility to assign individual wts. to grid points. A new weighting function derives the significance of grid points for the alignment of fields from preceding COMFA runs, using regression coeffs., means, and std. deviations of field variables as parameters. Just in strongly diverse congeneric series, the method does not underestimate the common structure and not overweight variable, interacting regions. CoMFA of a large series of 142 histamine H2 receptor agonistic imidazolylpropylguanidines (pD2 values from guinea pig atrium) is presented as example Results with three different alignments were compared: (1) exact superposition of the const. imidazolylpropylguanidine moiety, (2) SUPERIMPOSE or FIT of energy min., (3) minimization of the structures by weighted field fit with wts. based on COMFA with alignment 2. A significant improvement of cross-validated PLS results was obsd. from alignment to alignment: Leave-one-out approach: (1) 7 PC's, Q2=0.59, sPRESS=0.50, (2) 8 RC's, Q2=0.66, sPRESS=0.46, (3) 9 PC's, Q2=0.71, sPRESS=0.42. Cross validation with 10 groups (mean of 10 runs): (1) 6.3 PC's, Q2=0.59, sPRESS=0.50, (2) 6.1 PC's, Q2=0.65, sPRESS=0.47, (3) 9.5 PC's, Q2=0.71, sPRESS= $\delta$ .43. It is concluded that risks of the field fit method like producing artificial redundancy of the structures and ignoring entropy contributions to the free energy of binding are lowered with the given weighting method.

REFERENCE COUNT:

THERE ARE 22 CITED REPERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 9 OF 36 CA COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER:

130:66268 CA

TTTLE.

Compounds active at a novel site on receptor-operated calcium channels useful for treatment of neurological

disorders and diseases

INVENTOR(S):

Mueller, Alan L.; Moe, Scott T. NPS Pharmaceuticals, Inc., USA

SOURCE:

PCT Int. Appl., 252 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

22

LANGUAGE:

English

FAMILY ACC. NUM. COUNT: 6

PATENT INFORMATION:

PATENT ASSIGNEE(S):

PATENT NO. KIND DATE \_\_\_\_\_/ -----WO 9856752

APPLICATION NO. DATE

A1 19981217 WO 1998-US11608 19980611

W: JP

PRIORITY APPLN. INFO.:

US 1997-873011 A 19970611

MARPAT 130:66268 OTHER SOURCE(S):

GI

#### \* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

The compds. [I, II, III; R1 and R3 are independently selected from AR (un) substituted Ph, benzyl, phenoxy, H, alkyl, OH, etc.; R2 and R5 are independently selected from H, alkyl, hydroxyalkyl; R2-R5 together are imino; R1-R2 together are (CH2)n, (CH2)n-N(R6)-(CH2)n; n=0-6, at least one n greater than 0; R6 is H, alkyl, 2-hydroxyethyl, and alkylphenyl; R4 is selected from (un) substituted thiofuryl, pyridyl, Ph, benzyl, phenoxy, phenylthio, H, alkyl, chcloalkyl; X, X1 is independently selected from

(un) substituted Ph, benzyl, phenoxy, F, Cl, Br, Oh, etc.; m = 0-5; Y is N(R6)2, H when R1-R2 together are (CH2)n-N(R6)-(CH2)n], pharmaceutical compns., and pharmaceutical acceptable salts, complexes, and carriers are prepd. as antagonists of NMDA receptor-mediated responses for treating a neurol. disease or disorder such as stroke, head trauma, spinal cord injury, spinal cord ischemia, ischemia- or hypoxia-induced nerve cell damage, epilepsy, anxiety, neuropsychiatric or cognitive deficits due to ischemia or hypoxia such as those that frequently occur as a consequence of cardiac surgery under cardiopulmonary bypass, or neurodegenerative diseases such as Alzheimer's Disease, Huntington's Disease, Parkinson's Disease, or amyotrophic lateral sclerosis (ALS).

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 10 OF 36 CA COPYRIGHT 2003 ACS on STN DUPLICATE 3

ACCESSION NUMBER: 129:156780 CA

TITLE: Neuroprotective effects of NPS 846, a novel

N-methyl-D-aspartate receptor antagonist, after closed

head trauma in rats

AUTHOR(S): Gurevich, Boris; Artru, Alan A.; Lam, Arthur M.;

Mueller, Alan L.; Merkind, Vladimir; Talmor, Daniel;

Katchko, Ludmila; Shapira, Yoram

CORPORATE SOURCE: Department of Anesthesiology, Kaplan Hospital,

Rehovot, Israel

SOURCE: Journal of Neurosurgery (1998), 88(6), 1066-1074

CODEN: JONSAC; ISSN: 0022-3085

PUBLISHER: American Association of Neurological Surgeons

DOCUMENT TYPE: Journal LANGUAGE: English

The authors sought to det. whether 3,3-bis(3-fluorophenyl)propylamine (NPS 846), a novel noncompetitive N-methyl-D-aspartate receptor antagonist, alters outcome after closed head trauma in rats. The exptl. variables were: presence or absence of closed head trauma, treatment with NPS 846 or no treatment, and time at which the rats were killed (24 or 48 h). The NPS 846 (1 mg/kg) was administered i.p. at 1 and 3 h after closed head trauma or sham operation. Outcome measures were the neurol. severity score (NSS), ischemic tissue vol., hemorrhagic necrosis vol., and sp. gr., water content, and concns. of calcium, sodium, potassium, and magnesium in brain tissue. The following closed head trauma-induced changes in the injured hemisphere (expressed as the mean .+-. the std. deviation) were reversed by NPS 846: decreased sp. gr. of 1.035 .+-. 0.006 at 24 h was increased to 1.042 .+-. 0.004; the decreased potassium level of 0.583 .+-. 0.231 mg/L at 48 h and at 24 h was increased to 2.442 .+-. 0.860 mg/L; the increased water content of 84.7 .+-. 2.6% at 24 h was decreased to 79.8 .+-. 2%; the increased calcium level of 0.592 .+-. 0.210 mg/L at 24 h was decreased to 0.048 .+-. 0.029 mg/L; and the increased sodium level of 2.035 .+-. 0.649 mg/L was decreased to 0.631 .+-. 0.102 mg/L. Administration of NPS 846 also lowered the NSS (improved neurol. status) at 48 h (7 .+-. 3) and caused no significant changes in ischemic tissue or hemorrhagic necrosis vols. in the injured hemisphere at 24 or 48 h. this model of closed head trauma, NPS 846 improved neurol. outcome, delayed the onset of brain edema, and improved brain tissue ion homeostasis.

REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 11 OF 36 CA COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 129:156415 CA

TITLE: Riotransformat

TITLE: Biotransformation of tolterodine, a new muscarinic

receptor antagonist, in mice, rats, and dogs

AUTHOR(S): Andersson, Stig H. G.; Lindgren, Anders; Postlind,

Hans

CORPORATE SOURCE: Department of Drug Metabolism, Pharmacia & Upjohn AB,

Uppsala, S-751 82, Swed.

SOURCE: Drug Metabolism and Disposition (1998), 26(6), 528-535

CODEN: DMDSAI; ISSN: 0090-9556

PUBLISHER: Williams & Wilkins

DOCUMENT TYPE: Journal LANGUAGE: English

Tolterodine is intended for the treatment of urinary urge incontinence and other symptoms assocd. with an overactive bladder. The in vivo metab. of 14C-labeled tolterodine was investigated in rats, mice, and dogs by anal. of blood and urine samples, whereas in vitro metab. studies were performed by incubation of [14C]tolterodine with mouse, rat, dog, and human liver microsomes in the presence of NADPH. Tolterodine was extensively metabolized in vivo. Mice and dogs showed similar metabolite patterns, which correlated well with that obsd. in humans. In these species, tolterodine was metabolized along 2 different pathways, with the more important being the stepwise oxidn. of the 5-Me group to yield the 5-hydroxymethyl metabolite of tolterodine and then, via the aldehyde, the 5-carboxylic acid metabolite. The other pathway involved dealkylation of the nitrogen. In the subsequent phase II metab., tolterodine and the metabolites were conjugated with glucuronic acid to various degrees. Rats had a more extensive metab. and a markedly different metabolite pattern, with metabolites also being formed by hydroxylation of the nonsubstituted benzene ring. Gender differences were also obsd., with male rats showing more extensive metab. than females. Incubation of [14C]tolterodine yielded 5 metabolites with rat microsomes and 3 metabolites with mouse, dog, and human microsomes. The 5-hydroxymethyl metabolite of tolterodine and N-dealkylated tolterodine were major metabolites in all incubations, representing 83-99% of total metab. Although the extent of metab. varied among the species, the metabolic profiles were similar. Rat liver microsomes also formed metabolites hydroxylated in the nonsubstituted benzene ring. Thus, the metab. of tolterodine in mice and dogs corresponds to that obsd. in humans, whereas rats have a different metabolite pattern.

REFERENCE COUNT:

15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 12 OF 36 CA COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER:

129:197557 CA

TITLE:

Imidazolylpropylguanidines as histamine H2 receptor

agonists: 3D-QSAR of a large series

AUTHOR (S):

Dove, Stefan; Buschauer, Armin

CORPORATE SOURCE:

Institute of Pharmacy, University Regensburg,

Regensburg, D-93040, Germany

SOURCE:

Pharmaceutica Acta Helvetiae (1998), 73(3), 145-155

CODEN: PAHEAA; ISSN: 0031-6865

PUBLISHER:

Elsevier Science B.V.

DOCUMENT TYPE:

Journal

LANGUAGE:

English

Imidazolylpropylguanidines are potent histamine H2 receptor agonists and act as inotropic vasodilators. A large series of 141 derivs. was tested in the isolated guinea pig atrium and submitted to CoMFA. Since all compds. are full agonists, pD2 values reflect H2 receptor binding. Hydrophobicity was considered as .SIGMA.f of the variable structural moiety, calcd. by the Leo-Hansch method. Preliminary Hansch anal. with .SIGMA.f, (.SIGMA.f)2 and indicator variables showed that pD2 additively depends on contributions of certain substructures and has a hydrophobic optimum. For CoMFA, all 3D structures were optimized and aligned. Partial Least Squares anal. of pD2 as function of steric and electrostatic field variables and of .SIGMA.f and (.SIGMA.f)2 led to models with r2 of 0.78 with and 0.93 without hydrophobicity. Results indicate a parabolic dependence of pD2 on hydrophobic effects. The 3D distribution of field influences on pD2 suggests a model (shape and electrostatic potential) of the binding site. The role of branching and different substituent effects of a first and a second ring indicate that adequately branched structures induce a conformational change of the binding site enabling a favorable

```
accommodation of the second ring with various substituents.
REFERENCE COUNT:
                                  THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS
                           23
                                  RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT
     ANSWER 13 OF 36 CA COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER:
                           128:61341 CA
TITLE:
                           Preparation of aralkylamines as NMDA
                           receptor-ionophore complex antagonists
                           Mueller, Alan L.; Moe, Scott T.; Balandrin, Manuel F.;
INVENTOR(S):
                           Vanwagenen, Bradford C.; Delmar, Eric G.; Artman,
                           Linda D.; Barmore, Robert M.; Smith, Daryl L.
PATENT ASSIGNEE(S):
                           NPS Pharmaceuticals, Inc., USA; Mueller, Alan L.; Moe,
                           Scott T.; Balandrin, Manuel F.; Vanwagenen, Bradford
                           C.; Delmar, Eric G.; Artman, Linda D.; Barmore, Robert
                           M.; Smith, Daryl L.
                           PCT Int. Appl., 298 pp.
SOURCE:
                           CODEN: PIXXD2
DOCUMENT TYPE:
                           Patent
LANGUAGE:
                           English
FAMILY ACC. NUM. COUNT:
PATENT INFORMATION:
     PATENT NO.
                      KIND DATE
                                              APPLICATION NO. DATE
      -----
                                              -----
     WO 9746511
                                             WO 1996-US20697 19961211
                        A1
                              19971211
         W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
     CA 2257234
                        AA
                              19971211
                                         CA 1996-2257234 19961211
     AU 9713525
                        A1
                              19980105
                                              AU 1997-13525
                                                                 19961211
     AU 723349
                        B2
                              20000824
     EP 912494
                        A1
                              19990506
                                              EP 1996-945069 19961211
          R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
              IE, FI
     JP 2002511835
                         T2
                              20020416
                                              JP 1998-500538
                                                               19961211
PRIORITY APPLN. INFO.:
                                           US 1996-663013 A 19960607
                                           WO 1996-US19525 A 19961206
                                           WO 1996-US20697 W 19961211
OTHER SOURCE(S):
                           MARPAT 128:61341
     R7CHR4CR1R5CRR2R6 [I; R = H or N(R3)2; R1,R5 = (un)substituted Ph, -CH2Ph,
     -OPh; R2,R6 = H or (hydroxy)alkyl; R1R2 = (CH2)n or (CH2)nNR3(CH2)n; R2R6
     = NH; R3 = H, alkyl, CH2CH2OH, alkylphenyl; R4 = (un)substituted Ph,
     -pyridyl, -thienyl, etc.; R7 = (un) substituted Ph; n = 0-6] were prepd.
     Thus, (3-FC6H4)2CO was condensed with (EtO)2P(O)CH2CO2Et and the product
     converted in 6 steps to (3-FC6H4)2CHCH2CHMeNH2. Data for biol. activity
     of I were given.
     ANSWER 14 OF 36 CA COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER:
                           127:44446 CA
TITLE:
                           Stepwise leave-one-isomer-out free-Wilson approaches
                           as preprocessing tools in QSAR analysis of racemates
AUTHOR (S):
                           Dove, Stefan; Buschauer, Armin
CORPORATE SOURCE:
                           Institute of Pharmacy, University Regensburg,
                           Regensburg, D-93040, Germany
SOURCE:
                           Quantitative Structure-Activity Relationships (1997),
                           16(1), 11-19
                           CODEN: QSARDI; ISSN: 0931-8771
PUBLISHER:
                           VCH
DOCUMENT TYPE:
                           Journal
```

QSAR anal. of racemates is complicated if specific substituent-receptor interactions and, by that, specific spatial fits to the binding site

English

LANGUAGE:

result in individual but unknown activity differences of enantiomers, and even in structure-dependent changes of which is the more active configuration. In a first approxn., additivity of substituent contributions should be assumed instead of major conformational effects. Then, Free-Wilson anal. (FWA) can be used as preprocessing tool to reduce a starting set of all pairs of enantiomers into a final series of the probably (more) active configurations. A stepwise "leave-one-isomer-out" approach is applied, where the model is successively improved by checking all remaining pairs and leaving out one enantiomer, detd. by a special criterion of poorest prediction, in each step. The final model is given by the maximal F value. This approach was applied to histamine H1 antagonistic activity (pKB, guinea pig ileum) of 19 racemic and six non-chiral phenyl-halogenated N-(diphenylpropyl)-N'-(imidazolylpropyl)guanidines. Based on only eight variables because of additivity of meta and para contributions, the starting model with n = 44, r2 = 0.29, s = 0.52, F = 1.8, r2-PRESS=-0.14 has been improved to a final one with n = 31 (only six remaining pairs), r2 = 0.84, s = 0.24, F = 14.0, r2-PRESS=0.65. Addnl., each of the successive series was submitted to COMFA. Statistical parameters of the parallel COMFA and FWA models are closely related. QSAR results obtained with both methods correspond to well-known structure-activity relationships of diphenhydramine-like H1 antagonists. A direct application of the leave-one-isomer-out strategy to COMFA was less successful.

```
ANSWER 15 OF 36 CA COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER:
                        126:143970 CA
```

TITLE:

Preparation of 1-amino-3,3-diphenylpropanes and related compounds as noncompetitive antagonists of glutamate receptor operated calcium channels in the

central nervous system.

INVENTOR(S):

Mueller, Alan L.; Moe, Scott T.; Balandrin, Manuel F.; Delmar, Eric G.; Vanwagenen, Bradford C.; Artman, Linda D.; Barmore, Robert M.; Smith, Daryl L.

PATENT ASSIGNEE(S):

SOURCE:

Nps Pharmaceuticals, Inc., USA PCT Int. Appl., 313 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

```
PATENT NO.
               KIND DATE
                                    APPLICATION NO. DATE
                        -----
                                      -----
                   A1 19961219 WO 1996-US10201 19960607
    WO 9640097
       W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE,
           ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT,
           LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE,
           SG, SI
       RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
    US 6071970 A
                        20000606 US 1995-485038 19950607
    AU 9661125
                   A1
                        19961230
                                      AU 1996-61125
                                                     19960607
                   B2
    AU 716122
                        20000217
                   A1
    EP 831799
                        19980401
                                     EP 1996-918477 19960607
    EP 831799
                   B1
                       20030502
          AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
           IE, FI
    JP 11506469
                    T2 19990608
                                      JP 1996-502238 19960607
    BR 9609019
                   A 19990706
                                      BR 1996-9019
                                                    19960607
    NZ 310344
                   A 20010330
                                      NZ 1996-310344 19960607
                   E
    AT 238782
                        20030515
                                      AT 1996-918477 19960607
    PL 185492
                   B1 20030530
                                     PL 1996-323871 19960607
PRIORITY APPLN. INFO.:
                                   US 1995-485038 A 19950607
                                   US 1993-14813 B2 19930208
                                   US 1994-194210 B2 19940208
```

US 1994-288668 B2 19940809 WO 1994-US12293 A2 19941026 WO 1996-US10201 W 19960607

OTHER SOURCE(S):

MARPAT 126:143970

Title compds. [I; R1, R5 = M, OM, alkyl, hydroxyalkyl, alkoxy, acyloxy, AB (substituted) Ph, PhCH2, PhO; R2, R6 = H, alkyl, hydroxyalkyl; R2R4 = imino, (CH2)n, (CH2)nNR3(CH2)n; R3 = H, alkyl, HOCH2CH2, alkylphenyl; n = 0-6, only 1 n can = 0; R4 = (substituted) thiofuryl, pyridyl, Ph, PhCH2, PhO, PhS; X = (substituted) Ph, PhCH2, PhO; m = 0-5; Y = N(R3)2; when R1R2 = (CH2) nNR3 (CH2) n, then Y = H], were prepd. Thus, di-Et cyanomethylphosphonate was stirred 4 h with NaH in dimethoxyethane; 3,3'-difluorobenzophenone in dimethoxyethane was added and the mixt. was stirred 24 h at room temp. to give the cyanomethyl carbinol, which was hydrogenated to give an aminopropanol which was dehydrated and hydrogenated to give 3,3-bis(3-fluorophenyl)propylamine hydrochloride. The latter showed anticonvulsant activity against electroshock-induced seizures in mice with ED50 = 20.1 mg/kg i.p.

ANSWER 16 OF 36 USPATFULL on STN

Ι

ACCESSION NUMBER: 96:72128 USPATFULL

TITLE:

Universal, hydraulic, self adjusting, work clamping

device

INVENTOR(S):

Schuit, Johannes, 1433 Camilo Trillado, Carpinteria,

CA, United States 93013

NUMBER KIND DATE PATENT INFORMATION: US 5544872 19960813 APPLICATION INFO.: US 1994-288688 19940811 (8) DOCUMENT TYPE: Utility

FILE SEGMENT: Granted PRIMARY EXAMINER:

Watson, Robert C. LEGAL REPRESENTATIVE: Haefliger, William W.

NUMBER OF CLAIMS: EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 10 Drawing Figure(s); 4 Drawing Page(s)

LINE COUNT: 256

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Apparatus for clamping and orienting work relative to a tool, for AB processing, comprising, in combination two laterally extending longitudinally separated support bars, and connector means connected to and extending between the bars for positioning them in fixed separated condition, there being work receiving space between the bars; bar leveling means extending downwardly from the bars for supporting the bars on a support bed, the means being adjustable to adjust the leveling of the bars; and work clamping pistons carried by the bars for hydraulically actuated movement toward the work receiving space for engaging and clamping the work to hold the work in fixed position relative to the bed.

```
ANSWER 17 OF 36 CA COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER:
                         123:306618 CA
TITLE:
                         Arylalkylamine compounds active at a novel site on
                         receptor-operated calcium channels useful for
                         treatment of neurological disorders and diseases, and
                         preparation of these compounds
INVENTOR(S):
                         Mueller, Alan L.; Van Wagenen, Bradford C.; Delmar,
                         Eric G.; Balandrin, Manuel F.; Moe, Scott T.; Artman,
                         Linda D.
PATENT ASSIGNEE(S):
                         NPS Pharmaceuticals, Inc., USA
SOURCE:
                         PCT Int. Appl., 139 pp.
                         CODEN: PIXXD2
DOCUMENT TYPE:
                         Patent
LANGUAGE:
                         English
FAMILY ACC. NUM. COUNT:
PATENT INFORMATION:
     PATENT NO.
                    KIND DATE
                                         APPLICATION NO. DATE
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     WO 9521612
                                          WO 1994-US12293 19941026
                      A2
                            19950817
     WO 9521612
                      А3
                            19950921
         W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI,
             GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG,
             MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA,
             US, US
         RW: KE, MW, SD, SZ, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU,
             MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN,
             TD, TG
     CA 2182680
                      AA
                            19950817
                                           CA 1994-2182680 19941026
     AU 9480923
                      Α1
                            19950829
                                          AU 1994-80923
                                                           19941026
     AU 710575
                      B2
                            19990923
     EP 743853
                      Α1
                            19961127
                                          EP 1994-932057
                                                           19941026
     EP 743853
                      B1
                           20010502
        R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE
     CN 1148337
                     Α
                           19970423
                                          CN 1994-195074
                                                          19941026
     CN 1088585
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                            20020807
     JP 09509484
                      T2
                            19970922
                                          JP 1994-521191
                                                           19941026
     AT 200862
                      Ε
                            20010515
                                          AT 1994-932057
                                                           19941026
     ES 2156162
                      T3
                            20010616
                                          ES 1994-932057
                                                           19941026
     EP 1123922
                      A2
                           20010816
                                          EP 2000-121960
                                                           19941026
        R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE
    RU 2201224
                      C2
                           20030327
                                          RU 1996-118132
                                                          19941026
    US 6071970
                      Α
                            20000606
                                          US 1995-485038
                                                           19950607
    US 6306912
                      В1
                            20011023
                                          US 1995-483294
                                                           19950607
    US 6017965
                      Α
                           20000125
                                          US 1996-763480
                                                           19961211
    US 6211245
                      В1
                           20010403
                                          US 1998-186341
                                                           19981104
    US 6051610
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                           20000418
                                          US 1999-252433
                                                           19990218
    US 2002004522
                      A1
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                                          US 2001-825373
                                                           20010402
PRIORITY APPLN. INFO.:
                                       US 1993-14813
                                                        A2 19930208
                                       US 1994-194210
                                                        A 19940208
                                       US 1994-288668
                                                        A 19940809
                                                        A2 19940811
                                       US 1994-288688
                                       EP 1994-932057
                                                        A3 19941026
                                       WO 1994-US12293 W 19941026
                                       US 1995-485038
                                                        A2 19950607
                                       US 1996-663013
                                                        A2 19960607
                                       US 1996-763480
                                                        A2 19961211
                                       US 1997-869154
                                                        B2 19970604
                                       US 1997-873011
                                                        Al 19970611
                                       US 1998-186341
                                                        Al 19981104
OTHER SOURCE(S):
                       MARPAT 123:306618
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GΙ

H2CCONH (CH2CH2CH2NH) 3CH2CH2CH2CH2NH (CH2) 3NH2

AB A method is provided for identifying a compd. useful for the therapeutic treatment of a neurol. disease or disorder, e.g. stroke, head trauma, spinal cord injury, epilepsy, anxiety, or neurodegenerative diseases such as Alzheimer's Disease, Huntington's Disease or Parkinson's Disease, or useful as a muscle relaxant, analgesic, or adjuvant to general anesthetics. The compds. are active on a receptor-operated calcium channel, including, but not limited to, that present as part of an NMDA receptor-ionophore complex, a calcium-permeable AMPA receptor, or a nicotinic cholinergic receptor, as a noncompetitive antagonist. The method includes identifying a compd. which binds to the receptor-operated calcium channel at the site bound by arylalkylamine I, II, or III. Prepn. of arylalkylamine compds. and biol. testing are included.

L7 ANSWER 18 OF 36 CA COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 118:147506 CA

TITLE: Synthesis and histamine H2 agonistic activity of

arpromidine analogs: replacement of the

pheniramine-like moiety by non-heterocyclic groups.

II

III

AUTHOR(S): Buschauer, A.; Friese-Kimmel, A.; Baumann, G.;

Schunack, W.

CORPORATE SOURCE: Inst. Pharm., Freie Univ. Berlin, W-1000/33,

Germany

SOURCE: European Journal of Medicinal Chemistry (1992), 27(4),

321-30

CODEN: EJMCA5; ISSN: 0223-5234

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 118:147506

GΙ

AB Analogs of the potent histamine H2 agonist arpromidine (I), characterized by nonheterocyclic groups (Ph, cyclohexyl, alkyl) instead of the pheniramine-like portion, were prepd. and tested for their H2 agonistic and H1 antagonistic activity in the isolated guinea pig right atrium and ileum, resp. In the diphenylpropylguanidine series, an increase in H2 agonistic potency resulted from mono- or difluorination at one or both Ph rings in the meta and/or para position (pD2 .ltoreq. 7.75 vs pD2 = 7.15 for the unsubstituted parent compd.). Compds. chlorinated at both Ph rings were considerably less potent. Highest combined H2 agonistic/H1 antagonistic potency was found in the 4-fluorophenyl series. The arpromidine analog with cyclohexyl and Me group instead of Ph and pyridine ring was 30 times more potent than histamine in the atrium. The H1 antagonistic potency in cyclohexyl compds. was lower than in the diaryl series. Thus, arom. rings appear not to be required for high H2 agonistic potency but are useful for combined H2 agonistic/H1 antagonistic activity.

Т

ANSWER 19 OF 36 CA COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER:

115:8210 CA

TITLE:

Derivatives of arylalkylamines. XXVII. Synthesis and

pharmacological activity of several derivs. of

[3-(2-hydroxy-5-carboxy)phenyl]-3-phenylpropionic acid

Asoyan, E. L.; Balayan, R. S.; Pogosyan, A. V.;

Asatryan, T. O.; Markaryan, E. A.

CORPORATE SOURCE: SOURCE:

Inst. Tonk. Org. Khim., Yerevan, USSR Armyanskii Khimicheskii Zhurnal (1990), 43(11), 719-23

CODEN: AYKZAN; ISSN: 0515-9628

DOCUMENT TYPE:

LANGUAGE:

AUTHOR (S):

Journal Russian

I

OTHER SOURCE(S):

CASREACT 115:8210

GT

AB The reaction of p-HOC6H4CO2Me with PhCH:CHCO2Me in the presence of AlLC13 gives ester I. I can be converted to amides II (R = alkyl; X = 0) and these in turn reduced to amines II [X = H2 (III)]. The effect of III on the .alpha.-adrenoreceptors and the transmission of impulses by postganglio- sympathetic nerves and antispasmodic activity was studied.

ANSWER 20 OF 36 CA COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 110:107540 CA

TITLE: Biotransformation of terodiline. IV. Identification

of unconjugated and conjugated metabolites in dog and

human urine

AUTHOR (S): Noren, Bengt; Stroemberg, Signhild; Ericsson, Oerjan;

Lindeke, Bjoern

CORPORATE SOURCE: Kabi AB, Stockholm, S-112 87, Swed.

SOURCE: Acta Pharmaceutica Suecica (1988), 25(6), 281-92

CODEN: APSXAS; ISSN: 0001-6675

DOCUMENT TYPE: Journal LANGUAGE: English

Terodiline is mainly excreted in the form of metabolites. Unconjugated and conjugated metabolites excreted in dog and human urine were identified by mass spectrometry. The major metabolites found in both dog and human urine were N-tert-butyl-4-(4-hydroxyphenyl)-4-phenyl-2-butanamine, N-tert-butyl-4-(4-hydroxy-3-methoxyphenyl)-4-phenyl-2-butanamine and N-(2-hydroxymethyl-2-propyl)-4,4-diphenyl-2-butanamine. Six identified metabolites were excreted mainly as Me and glucuronic acid conjugates.

ANSWER 21 OF 36 CA COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 100:102836 CA

TITLE: Arylalkylamine derivatives. XIX. Synthesis of some

3-(2-hydroxy-3-methoxyphenyl)-3-phenyl-N-

(arylalkyl) propylamines and their biological activity

Balayan, R. S.; Akopyan, M. G.; Kaltrikyan, A. A.;

Markaryan, E. A.

CORPORATE SOURCE: Inst. Tonkoi Org. Khim. im. Mndzhoyana, Yerevan, USSR

SOURCE: Armyanskii Khimicheskii Zhurnal (1983), 36(10), 653-7

CODEN: AYKZAN; ISSN: 0515-9628

DOCUMENT TYPE: Journal LANGUAGE: Russian

Ι

OTHER SOURCE(S): CASREACT 100:102836

AUTHOR (S):

AUTHOR (S):

AR PhCH:CHCO2Me reacted with guaiacol in PhNO2 contq. AlCl3 at 80.degree. to give 51.4% dihydrocoumarin I via cyclization of the intermediate 2,3-HO(MeO)C6H3CHPhCH2COX (II; X = OMe). Sapong. I gave 85.4% II (X = OH), which reacted with SOCl2 to give II (X = Cl) and then with RNH2 [R = PhCH2CHMe, 3,4-(MeO)2C6H3, Ph2CHCH2CH2, Ph2CHCH2CHMe, PhCH2CH2CHMe] to give the corresponding II (X = NHR) in 72-92% yield. Reducing the latter with LiAlH4 gave 50-65% 2,3-HO(MeO)C6H3CHPhCH2CH2NHR (same R), which have pronounced and long-term .alpha.-sympatholytic activity (no data).

ANSWER 22 OF 36 CA COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 100:34210 CA

TITLE: Arylalkylamine derivatives. XVIII. Synthesis and

pharmacological activity of some 3-[2-hydroxy-4(or 5) -methylphenyl] -3-phenyl-N-(arylalkyl)propylamines Balayan, R. S.; Akopyan, M. G.; Kaltrikyan, A. A.;

Avakyan, O. M.; Markaryan, E. A.

CORPORATE SOURCE: Inst. Tonkoi Org. Khim. im. Mndzhoyana, Yerevan, USSR

SOURCE: Armyanskii Khimicheskii Zhurnal (1983), 36(7), 451-6 CODEN: AYKZAN; ISSN: 0515-9628

DOCUMENT TYPE: Journal LANGUAGE: Russian

OTHER SOURCE(S): CASREACT 100:34210

Arylation of PhCH:CHCO2Me with p- and m-cresol in the presence of AlCl3 gave 59.4% 6- and 53.4% 7-methyl-4-phenyl-3,4-dihydrocoumarin, resp.,

which were sapond. with NaOH to give 83.7% 5,2- and 77.5%

4,2-Me(HO)C6H3CHPhCH2CO2H. Treating these with SOCl2 and then RNH2 [R = PhCH2CHMe, 3,4-(MeO)2C6H3CH2CH2, PhCH2CH2CHMe, Ph2CHCH2CH2, Ph2CHCH2CHMe] in refluxing abs. C6H6 gave the corresponding Me(HO)C6H3CHPhCH2CONHR (I), which were also formed in 60-91% yield directly from the dihydrocoumarins and RNH2 in refluxing C6H6. LiAlH4 redn. of I in abs. Et2O gave, after acidification, 49-86% 5,2- and 4,2-Me(HO)C6H3CHPhCH2CH2NHR.cntdot.HCl, which showed significant .alpha.-adrenoblocking activity.

ANSWER 23 OF 36 USPATFULL on STN

ACCESSION NUMBER: 80:52502 USPATFULL

TITLE: Glycerol phosphites esterified with phenolcarboxylic

acids

INVENTOR(S): Mayer, Norbert, Gablingen, Germany, Federal Republic of

Pfahler, Gerhard, Augsburg, Germany, Federal Republic

Scheidl, Franz, Gersthofen, Germany, Federal Republic

Wiezer, Hartmut, Gersthofen, Germany, Federal Republic

PATENT ASSIGNEE(S): Hoechst Aktiengesellschaft, Germany, Federal Republic

of (non-U.S. corporation)

NUMBER KIND DATE -----

PATENT INFORMATION: APPLICATION INFO.:

US 4229382 19801021 19790312 (6) US 1979-19785

NUMBER DATE -----DE 1978-2811667 19780317

PRIORITY INFORMATION: DOCUMENT TYPE: Utility

FILE SEGMENT: Granted PRIMARY EXAMINER: Sutto, Anton H. LEGAL REPRESENTATIVE: Connolly and Hutz

NUMBER OF CLAIMS: EXEMPLARY CLAIM: LINE COUNT: 535

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The invention provides novel esters of glycerol, in which one of the OH groups of the glycerol is esterified with a phenolcarboxylic acid, while the two other OH groups are esterified with phosphoric or phosphorous acid, substituted by long-chain alcohols, amines, mercaptans or phenol compounds. The products are suitable as light and heat stabilizers for plastics. They are distinguished by a high resistance to hydrolysis and extraction.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 24 OF 36 CA COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 91:56595 CA

TITLE: Diarylallylamines and diarylpropylamines as

antidepressants

PATENT ASSIGNEE(S): Astra Lakemedel AB, Swed.

SOURCE: Jpn. Kokai Tokkyo Koho, 23 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent LANGUAGE: Japanese FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO. DATE
JP 54039057	A2	19790324	JP 1978-81818 19780704
GB 1602290	Α	19811111	GB 1977-27992 19770704
FI 7802093	A	19790105	FI 1978-2093 19780629
FI 64936	В	19831031	
FI 64936	С	19840210	
DK 7802951	A	19790105	DK 1978-2951 19780629
AU 7837612	A1	19800103	AU 1978-37612 19780629
AU 519960	B2	19820107	
CA 1111041	A1	19811020	CA 1978-306650 19780630
NO 7802305	Α	19790105	NO 1978-2305 19780703
NO 146743	В	19820823	
NO 146743	C	19821201	
AT 7804835	Α	19810115	AT 1978-4835 19780704
AT 363456	B	19810810	
EP 28682	A2	19810520	EP 1980-105028 19800824
EP 28682	<b>A</b> 3	19810805	
AT 8004933	A	19820415	AT 1980-4933 19801003
AT 368988	В	19821125	
PRIORITY APPLN. INFO.	:		GB 1977-27992 19770704
			GB 1978-21249 19780522
			EP 1978-850006 19780703
			AT 1978-4835 19780704
O.T.			

GΙ

AB Diarylallylamines and diarylpropylamines (I, II; R = H, alkyl, alkoxy, halo, CF3, amino; R1 = aryl, pyridyl; R2 = alkyl; R3 = H, alkyl) and their salts were prepd. and were effective antidepressants as tested in mice for noradrenaline and 5-hydroxytryptamine absorption with ED50 of 4.1-100 .mu.mol/kg. Thus, 27.5 g 4-(3-bromophenyl)-4-phenyl-2-butanone oxime was reduced with 3.5 g LiAlH4 in THF at room temp. to give 8.9 g crude II (R = 3-Br, R1 = Ph, R2 = Me, R3 = H) (III), which (7.9 g) was treated with 1.1 g oxalic acid in Me2CHOH to give 4.43 pure III.1/2 oxalate. Similarly prepd. were 24 addnl. I and I.

L7 ANSWER 25 OF 36 CA COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 92:41592 CA

TITLE: Glycerol phosphites esterified with phenolcarboxylic

acids

INVENTOR(S): Mayer, Norbert; Pfahler, Gerhard; Scheidl, Franz;

Wiezer, Hartmut

PATENT ASSIGNEE(S): Hoechst A.-G., Fed. Rep. Ger.

SOURCE: Ger. Offen., 34 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2811667	A1	19790920	DE 1978-2811667	19780317

	EP	4331			A.	3 1979	1017		EΡ	1979-100731	197903	312
	EP	4331			В:	l 1981	.0513					
		R:	BE,	CH,	DE,	FR, GB,	NL					
	US	4229	382		Α	1980	1021		US	1979-19785	197903	312
	ZA	7901	239		Α	1980	0430		ZA	1979-1239	197903	316
I	PRIORITY	Y APP	LN.	INFO.	:			DE	197	78-2811667	197803	317
-	2 T											

AB A series of 30 title compds. was prepd. as stabilizers for thermoplastic homo- and copolymers. Thus, 0.2 mol 4,3,5-HO(Me3C)2C6H2CO2H, 0.26 mol oxiranemethanol (I), 0.1 g KOH, and 0.2 mol 1,2-triacontanediol (reaction medium only at this stage) were stirred 2 h at 110.degree. under N, unreacted I was stripped in vacuo, 0.105 mol (EtO)3PO was added, and the mixt. was distd. to 180.degree. to give 130 g II. Also prepd. was, e.g., III.

II

L7 ANSWER 26 OF 36 CA COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 85:20811 CA

TITLE: 3,3-Diphenylpropylamine derivatives

INVENTOR(S): Tokuyama, Kanji; Tanaka, Mamoru PATENT ASSIGNEE(S): Shionogi and Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE

JP 50140431 A2 19751111 JP 1974-44765 19740419

PRIORITY APPLN. INFO.: JP 1974-44765 19740419

AB Methoxybenzenes (MeO) nC6H6-n (n = 2,3) were treated with

MeOCH2CH(CN)CH(OMe)2 (I) in the presence of an acid to give [(MeO)nC6H5-n]2CHCH(CH2OMe)CN (II), which were reduced to [(MeO)nC6H5-n]2CHCH(CH2OMe)CH2NH2 (III) and alkylated to give the N,N-dialkyl derivs. (IV). II were treated with a base to give [(MeO)nC6H5-n]2C:C(CN)Me (V), which were reduced to give [(MeO)nC6H5-n]2C:CMeCH2NH2 (VI). VI were alkylated to give the N,N-dialkyl derivs. (VII). Thus, 1,2-(MeO)2C6H4 was treated with I and AlCl3 3.5 hr at room temp. to give 30% II (n = 2), which (12 g) was reduced with Raney Ni in NH3-MeOH 2 hr at 50-60 atm and 80.degree. to give 10 g III (n = 2), which was refluxed with HCO2H and HCHO 8 hr to give 53.7% IV (n = 2, at positions 3 and 4). II (n = 2) was refluxed in NaOMe-MeOH 2.5 hr to give 87.6% V (n = 2), which (5.1 q) was reduced with Raney Ni to give 4.9 g VI (n = 2), which was refluxed with HCO2H and HCHO to give 61% VII (n = 2, at positions 3 and 4). Similarly prepd. were II-VII (n = 3, positions 2, 3, 4).

ANSWER 27 OF 36 CA COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER:

76:153260 CA

TITLE:

Arylalkylamine derivatives. III. Synthesis and pharmacological properties of N-(3,3-diarylpropyl)-N-

aryl (diphenyl) alkylamines

AUTHOR (S):

Mndzhoyan, A. L.; Markaryan, E. A.; Balayan, R. S.;

Avakyan, O. M.; Tsatinyan, A. S.

CORPORATE SOURCE:

SOURCE:

Inst. Tonkoi Org. Khim. im. Mndzhoyana, Erevan, USSR Armyanskii Khimicheskii Zhurnal (1971), 24(9), 791-7

CODEN: AYKZAN; ISSN: 0515-9628

DOCUMENT TYPE:

Journal

LANGUAGE:

Russian

For diagram(s), see printed CA Issue.

Five compds. of type I were prepd., in which R1, R2, R6, and R7 = H or AB MeO; R3 and R4 = H or Me; R5 = H or Ph; and n = 0 or 1. Compds. with R3 = H were prepd. by redn. of the amides with LiAlH4. Those with R3 = Me were prepd. by similar redn. of the Schiff bases. Sym-patholytic and adrenolytic properties were detd. on the sperm ducts of rats.

ANSWER 28 OF 36 CA COPYRIGHT 2003 ACS on STN DUPLICATE 5

ACCESSION NUMBER:

65:50767 CA

ORIGINAL REFERENCE NO.:

65:9521d-q

TITLE:

Pharmacology of diphenylalkyl derivatives. I.

Comparative studies of coronary dilator

diphenylalkylamine derivatives

AUTHOR (S):

Leszkovszky, G.; Tardos, L.; Erdely, Ilona; Harsanyi,

CORPORATE SOURCE:

Chinoin Pharm. Works, Budapest

SOURCE:

Acta Physiologica Academiae Scientiarum Hungaricae

(1966), 29(3-4), 283-97

CODEN: APACAB; ISSN: 0001-6756

DOCUMENT TYPE:

Journal English

LANGUAGE:

For diagram(s), see printed CA Issue.

AB The coronary dilator and other pharmacol. effects of 45 diphenylalkylamine derivs. (I) were reported for mice, rats, cats, and guinea pigs. Many of the compds. had coronary dilator activity comparable to that of prenylamine, and some, with identical potency to the reference compd., had certain other advantages such as lower hypertensive activity and a lower toxicity. For coronary dilator activity, the compd. must contain the secondary diphenylpropyl structure, with no primary or tertiary amino groups. Compds. contg. a secondary amino group must contain 2 aromatic groups linked to one end of the C chain, a propyl chain between the 2 aromatic rings and the amino N, and a basic N atom. The aralkyl group on the N must have a certain distance from the aromatic ring, usually 1 or 2 C atoms. Activity is also influenced by substituents on the aromatic rings of the diphenylpropylamine structure. Mols. in which another basic group is present in the N substituents are inactive. No correlation

existed between the spasmolytic and coronary dilator effects, or between the hypotensive and coronary dilator actions of the compds.

L7 ANSWER 29 OF 36 CA COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 61:61494 CA
ORIGINAL REFERENCE NO.: 61:10626d-e
TITLE: Diphenylalkanes

PATENT ASSIGNEE(S): Farbwerke Hoechst A.-G.

SOURCE: 8 pp.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable

PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE

GB 959313 19640527 GB
US 3177253 1965 US

PRIORITY APPLN. INFO.: DE 19600130

1-(m-Methoxyphenyl)-1-phenyl-3-aminopropane (24 g.) was hydrogenated at 60-5.degree. with 14 g. PhCH2Ac in 250 ml. Me2CHOH over Pd catalyst. Filtration, distn., and addn. of HCl gave 27.5 g. 1-phenyl-2-[3-(m-methoxyphenyl)-3-phenylpropyl]-aminopropane-HCl, m. 171-3.degree.. Also similarly prepd. were 1-phenyl-2- [3- (m-methoxyphenyl)-3-(p-methoxyphenyl)propyl]-aminopropane-HCl, m. 190-2.degree., 1-phenyl-2-[3-(m-methoxyphenyl)-1-phenylpropyl]aminopropane-HCl, m. 170-2.degree., 1-phenyl-2[3-(m-hydroxyphenyl)-3-phenylpropyl] aminopropane-HCl, m. 178-80.degree., 1-phenyl-2- [3-(m-hydroxyphenyl)-3-(p-hydroxyphenyl)propyl]aminopropane-HCl, m. 196-8.degree., 1-phenyl-2-[1-phenyl-1-(m-methoxyphenyl)propyl] aminopropane-HCl, m. 171-3.degree.. The compds. have an excellent activity on cardiac and general vascular circulation; 5-20 mg. caused rapid dilation of the coronary blood vessels.

L7 ANSWER 30 OF 36 CA COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 61:61495 CA ORIGINAL REFERENCE NO.: 61:10626e-f

TITLE: Purification of aromatic amines PATENT ASSIGNEE(S): Imperial Chemical Industries Ltd.

SOURCE: 8 pp.

DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION	NO.	DATE
	FR 1361275		19640515	FR		
	DE 1210876			DE		
	GB 966812			GB		
	US 3270058		1966	US		
PRIOR	RITY APPLN. INF	0.:		GB		19620702
ΔR	Mixed 2 4- and	2 6-+01	vlenediamin	og (T) ogg	£	2

AB Mixed 2,4- and 2,6-tolylenediamines (I) are sepd. from impurities of o-diamines (II) by distn. in the presence of a boric acid or derivs. Thus, distg. 110.3 parts I contg. 5.5% II in the presence of 5.5 parts tetraboric acid (III) gives I, b760 280-2.degree., contg. 0.5% II. Instead of III orthoboric acid, tributyl borate, or phenylboronic acid (or its anhydride) may be used in the distn. pot.

L7 ANSWER 31 OF 36 CA COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 54:56237 CA

ORIGINAL REFERENCE NO.: 54:10941d-i,10942a-d

TITLE:

Elimination of acetic acid during decarboxylation of organic acids. II. Formation of .alpha.,.alpha.diarylethylenes from .beta.,.beta.'-diarylbutyric

acids

AUTHOR(S): CORPORATE SOURCE: Gogte, G. R.; Kasaralkar, D. Y.

Inst. Sci., Bombay

Journal of the University of Bombay, Science: Physical Sciences, Mathematics, Biological Sciences

and Medicine (1958), 27(No. 3), 41-54

CODEN: JUBSAS; ISSN: 0368-4644

DOCUMENT TYPE: LANGUAGE:

SOURCE:

Journal Unavailable

cf. C.A. 54, 8717b. The prepn. of variously substituted .beta.,.beta.-diarylbutyric acids and their behavior on distn. with lime was described. A mixt. of 32 cc. AcCH2CO2Et (I) and 31 cc. o-cresol Me ether (II) cooled to 0-5.degree., 200 cc. 70% H2SO4 added gradually with shaking, the mixt. left 8 hrs. at room temp., poured on crushed ice and the semisolid lump hydrolyzed by refluxing 2 hrs. with 160 cc. aq. 30% NaOH and 100 cc. MeOH gave 16 g. .beta.,.beta.-bis(4-methoxy-3methylphenyl)butyric acid (III), m. 127.degree.; anilide m. 143.degree.; Et ester, m. 65.degree.. 2-Methoxy-4-methyl-.beta.-methylcinnamic acid (IV), m. 139.degree. (EtOH), obtained by an alk. hydrolysis of 4,7-dimethylcoumarin, similarly condensed with II and anisole, resp., gave .beta.-(2-methoxy-4-methylphenyl)-.beta.-(4-methoxy-3-methylphenyl)butyric acid (V), m. 120-1.degree. (anilide m. 139.degree.; Et ester m. 62.degree.), and .beta.-(2-methoxy-4-methylphenyl)-.beta.-(4methoxyphenyl)butyric acid (VI), m. 162.degree. [anilide m. 136.degree.; Et ester m. 60.degree. (MeOH)]. Similarly, 20 g. 2-methoxy-5-methyl-.beta.-methylcinnamic acid (VII) (Auwers, C.A. 11, 2325) condensed with 24 cc. anisole gave 19 g. .beta.-(2-methoxy-5-methylphenyl)-.beta.-(4methoxyphenyl)butyric acid (VIII), m. 163.degree.; anilide m. 153.degree.; Et ester b17 270.degree.. However, 10 g. VII condensed likewise with 6 cc. p-cresol gave 5 g. butyrolactone of .beta.-(2-methoxy-5-methylphenyl)-.beta.-(2-hydroxy-5-methylphenyl)butyric acid, m. 146.degree., 25 g. of which refluxed 2 hrs. with 200 cc. 30% NaOH soln. and subsequently methylated by adding 100 cc. Me2SO4 at 50.degree., refluxing 2 hrs., leaving overnight, and working up gave 15 g. .beta.,.beta.-bis(2-methoxy-5methylphenyl)butyric acid (IX), m. 130.degree.; anilide m. 117.degree.; Et ester m. 60.degree.. The following butyrolactones and their corresponding butyric acids were similarly prepd. (g. substituted cinnamic acid, amt. phenol, g. substituted butyrolactone obtained, m.p., the corresponding butyric acid prepd., its m.p., m.p. of anilide, and m.p. of Et ester given): 30 g. IV, 33 cc. p-cresol, 22 g. butyrolactone of .beta.-(2-methoxy-4-methylphenyl)-.beta.-(2-hydroxy-5-methylphenyl)butyric acid (X), 160.degree., .beta.-(2-methoxy-4-methylphenyl)-.beta.-(2-methoxy-5-methylphenyl)butyric acid (XI) (10 g. from 25 g. X), 119.degree., 149.degree., 55.degree. (petr. ether); 30 g. VII, 33 cc. m-cresol, 18 g. butyrolactone of .beta.-(2-methoxy-5-methylphenyl).beta.-(2-hydroxy-4methylphenyl)butyric acid, -, -, 155.degree., 149.degree., 55.degree.; g. IV, 11 cc. m-cresol, 7 g. butyrolactone of .beta.-(2-methoxy-4methylphenyl)-.beta.-(2-hydroxy-4-methylphenyl)butyric acid, 105.degree., .beta.,.beta.-bis(2-methoxy-4-methylphenyl)butyric acid (XII), 151.degree., 150.degree., 84.degree.; 10 g. VII, 10 g. resorcinol, 5 g. hydroxybutyrolactone of .beta.-(2-methoxy-5-methylphenyl)-.beta.-(2,4dihydroxyphenyl)butyric acid (XIII), 220-1.degree., .beta.-(2-methoxy-5methylphenyl) - .beta. - (2,4-dimethoxyphenyl)butyric acid (XIV) (8 g. from 15 g. of XIII), 116.degree., 165.degree., - (b10 240.degree.); 10 g. IV, 10 g. resorcinol, 10 g. hydroxybutyrolactone of .beta.-(2-methoxy-4methylphenyl) - .beta. - (2,4-dimethoxyphenyl)butyric acid (XV), 190.degree. (methoxy deriv., m. 183.degree.), .beta.-(2-methoxy-4-methylphenyl)-.beta.(2,4-dimethoxyphenyl)butyric acid (XVI), 116-17.degree., 132.degree., -(b15 160.degree.). Both, .beta.,.beta.-bis(p-methoxyphenyl)butyric acids, as well as .beta.-(p-methoxyphenyl)-.beta.-(o-methoxyphenyl)butyric acids, on distn. with lime at 3 mm., lost a mol. of AcOH and gave .alpha.,.alpha.-bis(substituted-phenyl)ethylenes, but .beta.,.beta.-bis(omethoxyphenyl) butyric acids, under the same conditions, were demethylated to butyrolactones and Me esters of the corresponding butyric acids. The following were the results of distn. with lime of the various butyric acid

derivs. prepd. (butyric acid deriv., product obtained, m.p. given): III, .alpha.,.alpha.-bis(4-methoxy-3-methylphenyl)ethylene, 100.degree. (MeOH); V, .alpha.-(2-methoxy-4-methylphenyl)-.alpha.'-(4-methoxy-3-methylphenyl)ethylene, 104.degree. (MeOH); VI, .alpha.-(2-methoxy-4-methylphenyl)-.alpha.-(4-methoxyphenyl)ethylene, 142.degree. (MeOH); VIII, .alpha.-(2-methoxy-5-methylphenyl)-.alpha.-(4-methoxyphenyl)ethylene, 140.degree. (MeOH). IX, XII, XII, XIV, and XVI gave the butyrolactones and Me esters of the corresponding butyric acids. IV and VII distd. with lime at 4 mm. gave 4,7- and 4,6-dimethylcoumarins, resp. All compds., unless stated otherwise, were crystd. from 70% alc.

L7 ANSWER 32 OF 36 CAOLD COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: CA65:9521d CAOLD

TITLE: pharmacology of diphenylalkyl derivs. - (I) comparative

studies of coronary dilator diphenylalkylamine derivs.

AUTHOR NAME: Leszkovszky, Gyorgy; Tardos, L.; Erdelyi, I.; Harsanyi, K.

L7 ANSWER 33 OF 36 CAOLD COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: CA61:10626e CAOLD

TITLE: purification of aromatic amines

PATENT ASSIGNEE: Imperial Chemical Industries Ltd.

DOCUMENT TYPE: Patent

PATENT NO. KIND DATE

PI FR 1361275

DE 1210876

GB 966812

US 3270058 1966

L7 ANSWER 34 OF 36 CAOLD COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: CA61:10626d CAOLD

TITLE:

diphenylalkanes

PATENT ASSIGNEE: Fa

Farbwerke Hoechst A.-G.

DOCUMENT TYPE: Patent

PATENT NO. KIND DATE

PI GB 959313

US 3177253 1965

L7 ANSWER 35 OF 36 CAOLD COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: CA54:10941e CAOLD

TITLE: eli

elimination of AcOH during decarboxylation of org. acids -

(II) formation of .alpha.,.alpha.-diarylethylenes from

.beta.,.beta.'-diarylbutyric acids

AUTHOR NAME: Gogte, G. R.; Kasaralkar, D. Y.

L7 ANSWER 36 OF 36 PHAR COPYRIGHT 2003 PJB on STN

TX NPS has discontinued development of NPS-846, a synthetic glutamate receptor blocker Araxin compound in favour of NPS-1506 (qv) (Company communication, Sep 1997). NPS-846 was in development for the potential treatment of acute and chronic pain as well as stroke and traumatic head injury (Scrip, 1995, 2028, 17). Araxin compounds inhibit glutamate-triggered calcium influx into nerve cells (Scrip, 1994, 1927, 11).

#### Preclinical

In preclinical studies, NPS-846 showed significant neuroprotective effects even when administered 2hr after the initial blood supply cut-off (Scrip, 1995, 2028, 17). In preclinical tests, the Araxin compounds have demonstrated broad efficacy as analgesics without the adverse effects associated with other glutamate blockers (Scrip, 1994, 1927, 11). Further methods of modulating glutamate receptor activity for indications such as muscle relaxation and cognition

```
L2
     ANSWER 1 OF 25 REGISTRY COPYRIGHT 2003 ACS on STN
RN
     356782\29-1 REGISTRY
CN
     Benzenepropanamide, 2-hydroxy-3,4-dimethyl-.beta.-phenyl-N-(2-
     phenylpropyl) - (9CI) (CA INDEX NAME)
FS
     3D CONCORD
MF
     C26 H29 N \ \ \ \ \ \ \ \ \ 2
     Chemical Library
SR
           Ph
                                 Ph
      OH
Me.
                        √NH-CH2-CH-Me
            CH- CH2-
                     - C-
Me
```

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\* L2ANSWER \$\frac{1}{2}\$ OF 25 REGISTRY COPYRIGHT 2003 ACS on STN 210573-54-9 REGISTRY RNCN.beta.-D-Glucopyranosiduronic acid, 4-methyl-2-[(1R)-3-[(1methylethyl)amino]-1-phenylpropyl]phenyl (9CI) (CA INDEX NAME) FS STEREOSEAROH C25 H33 N O MF SR CA LC STN Files: &A, CAPLUS Absolute stereochemiatry. CO2H HO. S S HO<sup>¶</sup> R OH Ph NHPr-i

#### \*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 3 OF 25 REGISTRY COPYRIGHT 2003 ACS on STN

RN 200429-71-6 REGISTRY

CN Phenol, 4-[3-amino-1-(3-fluorophenyl)propyl]-2-fluoro- (9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C15 H15 F2 N O

CI COM

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

- 2 REFERENCES IN FILE CA (1907 TO DATE)
- 2 REFERENCES IN FILE CAPLUS (1907 TO DATE)
- L2 ANSWER 4 OF 25 REGISTRY COPYRIGHT 2003 ACS on STN
- RN 191233-24-3 REGISTRY
- CN Guanidine N-[3-(3,4-dichlorophenyl)-3-phenylpropyl]-N'-[3-(1H-imidazol-4-yl)propyl], (S)- (9CI) (CA INDEX NAME)
- FS STEREOSEARCH
- MF C22 H25 Cl2 \N5
- SR CA
- LC STN Files: CA, CAPLUS

Absolute stereochemistry.

#### \*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

- 1 REFERENCES IN FILE CA (1907 TO DATE)
- 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)
- L2 ANSWER 5 OF 25 REGISTRY COPYRIGHT 2003 ACS on STN
- RN 191233-02-0 REGISTRY
- CN Guanidine, N-[3-(3,4-difluorophenyl)-3-(4-fluorophenyl)propyl]-N'-[3-(1H-imidazol-4-yl)propyl]-, (R)- (9CI) (CA INDEX NAME)
- FS STEREOSEARCH
- MF C22 H24 F3 N5
- SR CA
- LC STN Files: CA, CAPLUS

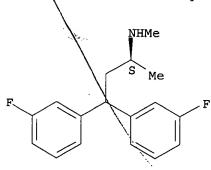
Absolute stereochemistry.

- 1 REFERENCES IN FILE CA (1907 TO DATE)
- 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)
- L2 ANSWER 6 OF 25 REGISTRY COPYRIGHT 2003 ACS on STN
- RN 186495-56-7 REGISTRY
- CN Benzenepropanamine, 3-fluoro-.gamma.-(3-fluorophenyl)-N,.alpha.-dimethyl-, (.alpha.S)- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

- CN Benzenepropanamine, 3-fluoro-.gamma.-(3-fluorophenyl)-N,.alpha.-dimethyl-, (S)-
- FS STEREOSEARCH
- MF C17 H19 F2 N
- SR CA
- LC STN Files: CA, CAPLUS, USPATFULL

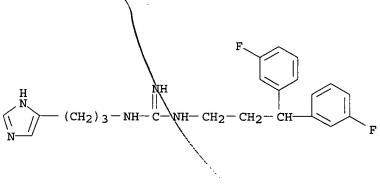
Absolute stereochemistry.



#### \*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

- 5 REFERENCES IN FILE CA (1907 TO DATE)
- 5 REFERENCES IN FILE CAPLUS (1907 TO DATE)
- L2 ANSWER 7 OF 25 REGISTRY COPYRIGHT 2003 ACS on STN
- RN 144478-00-2 REGISTRY
- CN Guanidine, N-[3,3-bis(3-fluorophenyl)propyl]-N'-[3-(1H-imidazol-4-
- yl)propyl]-, dihydrochloride (9CI) (CA INDEX NAME)
  MF C22 H25 F2 N5 . 2 Cl H
- SR CA
- LC STN Files: BEILSTEIN\*, CA, CAPLUS

(\*File contains numerically searchable property data) (191233-28-0)



●2 HC1

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

ANSWER 8 OF 25 REGISTRY COPYRIGHT 2003 ACS on STN L2

RN 144452-04-0 REGISTRY

CN Benzenepropanamine, 3-chloro-.gamma.-(3-fluorophenyl)-(9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C15 H15 Cl F N

CI COM

SR CA

CRN

LC STN Files: BEILSTEIN\*, CA, CAPLUS, USPATFULL (\*File contains numerically searchable property data)

#### \*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

- 4 REFERENCES IN FILE CA (1907 TO DATE)
- 4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

Ĺ2 ANSWER 9 OF 25 REGISTRY COPYRIGHT 2003 ACS on STN

RN 144451-98-9 REGISTRY

CN Benzenepropanamine, 3-fluoro-.gamma.-(3-fluorophenyl)- (9CI) (CA INDEX NAME)

OTHER NAMES:

CNNPS 846

FS 3D CONCORD

MF C15 H15 F2 N

CI COM

SR CA

LC STN Files: BEILSTEIN\*, CA, CAPLUS, PHAR, TOXCENTER, USPATFULL (\*File contains numerically searchable property data)



7 REFERENCES IN FILE CA (1907 TO DATE)
7 REFERENCES IN FILE CAPLUS (1907 TO DATE)



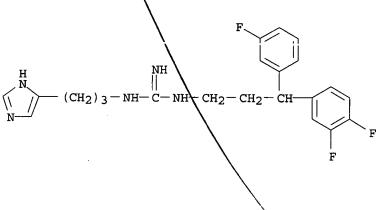
- L2 ANSWER 10 OF 25 REGISTRY COPYRIGHT 2003 ACS on STN
- RN 144451-90-1 REGISTRY
- CN Benzenepropanamine, 3-fluoro-.gamma.-phenyl- (9CI) (CA INDEX NAME)
- FS 3D CONCORD
- MF C15 H16 F N
- CI COM
- SR CA
- LC STN Files: BEILSTEIN\*, CA, CAPLUS, USPATFULL (\*File contains numerically searchable property data)

#### \*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

- 4 REFERENCES IN FILE CA (1907 TO DATE)
- 4 REFERENCES IN FILE CAPLUS (1907 TO DATE)
- L2 ANSWER 1 OF 25 REGISTRY COPYRIGHT 2003 ACS on STN
- RN 144451-8\(\frac{1}{4}-0\) REGISTRY
- CN Benzenepropanoic acid, .alpha.-(aminocarbonyl)-3-chloro-.beta.-(3-chloropheryl)- (9CI) (CA INDEX NAME)
- FS 3D CONCORD
- MF C16 H13 Cl2\N O3
- SR CA
- LC STN Files: BEILSTEIN\*, CA, CAPLUS

(\*File contains numerically searchable property data)

- 1 REFERENCES IN FILE CA (1907 TO DATE)
- 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)
- L2 ANSWER 12 OF 25 REGISTRY COPYRIGHT 2003 ACS on STN
- RN 144451-00-3 REGISTRY
- CN Guanidine, N-[3-(3,4-difluorophenyl)-3-(3-fluorophenyl)propyl]-N'-[3-(1H-imidazol-4-yl)propyl]- (9CI) (CA INDEX NAME)
- FS 3D CONCORD
- MF C22 H24 R3 N5
- CI COM
- SR CA
- LC STN Files: \ CA, CAPLUS



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

- 2 REFERENCES IN FILE CA (1907 TO DATE)
- 2 REFERENCES IN FILE CAPLUS (1907 TO DATE)
- L2 ANSWER 13 OF 25 REGISTRY COPYRIGHT 2003 ACS on STN
- RN 134220-32\9 REGISTRY
- CN Phenol, 4-\( 1-[(1-methyl-3-phenylpropyl) amino] ethenyl] -2-[3-[(1-methyl-3-phenylpropyl) amino] -1-phenyl-3-butenyl] (9CI) (CA INDEX NAME)
- FS 3D CONCORD
- MF C38 H44 N2 O
- SR CA
- LC STN Files: CA CAPLUS

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

- 1 REFERENCES IN FILE CA (1907 TO DATE)
- 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

```
ANSWER 1/4 OF 25 REGISTRY COPYRIGHT 2003 ACS on STN
L2
RN
     123936-53-7 REGISTRY
CN
     Hydrocinnamanilide, 2,4-dimethoxy-.beta.-(6-methoxy-m-tolyl)-.beta.-methyl-
             (da index name)
     3D CONCORD
FS
MF
     C26 H29 N O4
SR
     CAOLD
LC
     STN Files:
                  BEILSTEIN*, CA, CAOLD, CAPLUS
         (*File contains numerically searchable property data)
            0
  OMe
        CH2-C-NHPh
         - Me
 MeC
            OMe
```

```
1 REFERENCES IN FILE CA (1907 TO DATE)
                1 REFERENCES IN FILE CAPLUS (1907 TO DATE)
                1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)
L2
     ANSWER 15 OF 25 REGISTRY COPYRIGHT 2003 ACS on STN
RN
     119433-48-6 REGISTRY
     .alpha.-D-Glucopyranosiduronic acid, 4-[3-[(1,1-dimethylethyl)amino]-1-
CN
     phenylbutyN-2-methoxyphenyl, [S-(R*,R*)]- (9CI) (CA INDEX NAME)
MF
     C27 H37 N O8
SR
     CA
LC
     STN Files:
                   CAPLUS
                    OMe
HO2C
              0
  HO
              OH
                             {
m CH_2}-{
m CH}-{
m Me}
                         CH^{1}
        OH
                         Ph
                                  NHBu-t
```

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

- 1 REFERENCES IN FILE CA (1907 TO DATE)
- 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)
- L2 ANSWER 16 OF 25 REGISTRY COPYRIGHT 2003 ACS on STN
- RN 97153-02-1 REGISTRY
- CN Phenethylamine, N-[3-(m-methoxyphenyl)-3-phenylpropyl]-.alpha.-methyl-

```
(7CI) (CA INDEX NAME)
FS
     3D CONCORD
MF
     C25 H29 N O
CI
     COM
     STN Files:
LC
                  BEILSTEIN*, CA, CAOLD, CAPLUS
          (*File contains numerically searchable property data)
             CH-CH2
MeO
                     CH_2-NH-CH-CH_2-Ph
            Ph
                             Мe
**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**
               1 REFERENCES IN FILE CA (1907 TO DATE)
               1 REFERENCES IN FILE CAPLUS (1907 TO DATE)
               1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)
L2
     ANSWER 17 OF 25 REGISTRY COPYRIGHT 2003 ACS on STN
RN
     9595&-75-5 REGISTRY
CN
     Pheno (, 3,4'-[3-[(.alpha.-methylphenethyl)amino]propylidene]di- (7CI) (CA
     INDEX WAME)
     3D CONCORD
FS
     C24 H27\N O2
MF
CI
     COM
LC
     STN Files
                  BEILSTEIN*, CA, CAOLD, CAPLUS
         (*File\contains numerically searchable property data)
                         Me
            CH<sub>2</sub>-
                - CH2
                     MH-
                         CH-CH2-Ph
**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**
               1 REFERENCES IN FILE CA (1907 TO DATE)
               1 REFERENCES IN FILE CAPLUS (1907 TO DATE)
               1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)
L2
     ANSWER 18 OF 25 REGISTRY COPYRIGHT 2003 ACS on STN
RN
     89036-00-0 REGISTRY
     Phenol, 2-methoxy-6-[3-[(1-methyl-3,3-diphenylpropyl)amino]-1-
CN
     phenylpropyl] -, hydrochloride (9CI) (CA INDEX NAME)
MF
     C32 H35 N O2 . Cl H
LC
     STN Files:
                CA, CAPLUS
CRN
    (344880-85-9)
```

1 REFERENCES IN FILE CA (1907 TO DATE) 1 REFERENCES IN FILE CAPLUS (1907 TO DATE) L2ANSWER 19 OF 25 REGISTRY COPYRIGHT 2003 ACS on STN RN89028-0**\(\)**-2 REGISTRY Benzenephopanamide, N-[2-(3,4-dimethoxyphenyl)ethyl]-2-hydroxy-3-methoxy-CN .beta.-phenyl- (9CI) (CA INDEX NAME) FS 3D CONCORD MF C26 H29 N O5 LC STN Files: CA, CAPLUS, CASREACT Ph 0 CH-- CH<sub>2</sub>-- C-- NH-- CH<sub>2</sub>-- CH<sub>2</sub>-OH OMe OMe OMe

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE) 1 REFERENCES IN FILE CAPLUS (1907 TO DATE) L2 ANSWER 20 OF 25 REGISTRY COPYRIGHT 2003 ACS on STN 88407-46-9 REGISTRY RNCNPhenol, 4-methyl-2-[3-[(1-methyl-2-phenylethyl)amino]-1-phenylpropyl]-(CA INNEX NAME) (9CI) FS 3D CONCORD C25 H29 N O MFSTN Files: LCCA, CAPLUS Me  $CH-CH_2-CH_2-NH-CH-CH_2-Ph$ OH Ph Me

```
1 REFERENCES IN FILE CA (1907 TO DATE)
                 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)
L2
     ANSWER 21 OF 25 REGISTRY COPYRIGHT 2003 ACS on STN
     72371-98-3 REGISTRY
RN
     Benzenepropanoic acid, 3-(1,1-dimethylethyl)-.beta.-[3-(1,1-dimethylethyl)-
CN
     4-hydroxyphenyl]-4-hydroxy-.beta.-methyl-, 2-[4-[[[bis[3,5-bis(1,1-
     dimethylethyl)-4-hydroxyphenyl]acetyl]oxy]methyl]-1,6-bis(octadecyloxy)-
     2,5,7-trioxa-1,6-diphosphapentacos-1-yl]hydrazide (9CI) (CA INDEX NAME)
FS
     3D CONCORD '
     C111 H192 N2, O12 P2
MF
                   \BEILSTEIN*, CA, CAPLUS, USPATFULL
LC
     STN Files:
          (*File contains numerically searchable property data)
                                                                 PAGE 1-A
                                OH
                                      Bu-t
                                  - Me
                                CH<sub>2</sub>
                   HO
                       t-Bu
                                НИ
                                      (CH_2)_{17} - Me
                                0
                                CH<sub>2</sub>
                                          (CH_2)_{17} - Me
                                                                 PAGE 2-A
                                         -O- (СН<u>х</u>) <sub>17</sub>-ме
                                CH- O- P-
                                CH<sub>2</sub>
                                Ō
                                c = 0
                 t-Bu
                                             Bu-t
                                CH-
                   HO
                                             ОН
                       t-Bu
                                    t-Bu
```

#### 1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 22 OF 25 REGISTRY COPYRIGHT 2003 ACS on STN

RN 70823-68-6 REGISTRY

CN Benzenepropanamine, .alpha., 3-dimethyl-.gamma.-(3-methylphenyl)-,

ethanedioate (1:1) (9CI) (CA INDEX NAME)

MF C18 H23 N . C2 H2 O4

LC STN Files: CA, CAPLUS

CM 1

CRN 70823-67-5 CMF C18 H23 N

$$\begin{array}{c|c} & \text{NH}_2 \\ & \text{CH}_2\text{--}\text{CH---}\text{Me} \\ \\ \text{Me} & \text{Me} \end{array}$$

CM 2

CRN 144-62-7 CMF C2 H2 O4

- 1 REFERENCES IN FILE CA (1907 TO DATE)
- 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)
- L2 ANSWER 23 OF 25 REGISTRY COPYRIGHT 2003 ACS on STN
- RN 59484-98-9 REGISTRY
- CN Benzenepropanamine, .gamma.-(3,4-dimethoxyphenyl)-3,4-dimethoxy-.beta.(methoxymethyl)- (9CI) (CA INDEX NAME)
- FS 3D CONCORD
- MF C21 H29 N O5
- LC STN Files: CA, CAPLUS

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 24 OF 25 REGISTRY COPYRIGHT 2003 ACS on STN

RN 36318-44-2 REGISTRY

CN Benzenepropanamine, 3,4-dimethoxy-N-(1-methyl-3,3-diphenylpropyl)-.gamma.-phenyl- (9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C33 H37 N O2

CI COM

LC STN Files: BEILSTEIN\*, CA, CAPLUS

(\*File contains numerically searchable property data)

$$\begin{array}{c|c} \text{Ph} & \text{Me} \\ | & | \\ \text{CH-CH}_2\text{-CH}_2\text{-NH-CH-CH}_2\text{-CHPh}_2 \\ \\ \text{MeO} & \\ \text{OMe} \end{array}$$

#### \*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 25 OF 25 REGISTRY COPYRIGHT 2003 ACS on STN

RN 5966-37-0 REGISTRY

CN Benzenepropanamine, N-[2-(3,4-dimethoxyphenyl)-1-methylethyl]-3-methyl-.gamma.-phenyl- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Phenethylamine, 3,4-dimethoxy-.alpha.-methyl-N-(3-phenyl-3-m-tolylpropyl)(7CI, 8CI)

FS 3D CONCORD

MF C27 H33 N O2

LC STN Files: CA, CAOLD, CAPLUS, TOXCENTER

#### \*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

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